BULLETIN OF THE AMERICAN INSTITUTE OF ARCHITECTS

March, 1947

Official Notices to Members

CONVENTION ARRANGEMENTS • PROGRAM • NOTICES

Public and Professional Relations

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BUILDING TYPE STUDY—SCHOOL BUILDINGS
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BULLETIN OF THE AMERICAN INSTITUTE OF ARCHITECTS

March, 1947

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The Institute's New Publication

WITH THE DEVELOPMENT of the revised structure of The Institute, it is becoming evident that the individual member is going to hear more frequently and in greater volume from headquarters in The Octagon.

In addition to the monthly appearance of the *Journal,* the *A.I.A. Bulletin,* started in February 1944, has brought to the membership the official notices regarding meetings, nominations for offices, proposed by-law changes and the like. From the Washington Representative has come, in addition, the occasional planographed bulletins relating to legislative matters at the national level and to various problems of professional relationship. And now, with the new Department of Education and Research beginning to function, there is promised a flow of technical information.

To consolidate these three currents in one channel, you now have in your hands the first number of a bimonthly publication which will bring to you in a single package that which has heretofore reached you in piecemeal fashion, and in addition the technical data originating in the new Department of Education and Research. When the publishing schedule settles down to its anticipated normal form, you should receive the *Journal,* as now, on or about the first of each month, and the *Bulletin* on or about the middle of alternate months—January, March, May, July, September and November.

In its arrangement of contents, the new publication indicates, by a division into three departments, a distinct grouping of the three kinds of material under subheads—each department starting on a right-hand page. The purpose is to make easier for the membership the finding of an item falling into one of the three main categories—official notices from The Institute's officers, news and comment from the Director of Public and Professional Relations, and technical data from the Director of Education and Research.

Vol. I, No. 1 of the BULLETIN OF THE AMERICAN INSTITUTE OF ARCHITECTS comes to you with The Board's hope and belief that it and its succeeding issues will prove to be an efficient vehicle for the steadily growing service of The Institute in behalf of its corporate membership—a body of professionals which at this date number some 6700.

ALEXANDER C. ROBINSON, III
Secretary.

The 1947 Convention of The Institute

FINAL OFFICIAL NOTICE TO MEMBERS, CHAPTERS AND STATE ORGANIZATIONS

THE February number of the *Bulletin* contained various official notices to members and chapters concerning the 1947 Convention of The Institute to be held in Grand Rapids, Michigan, on April 29-30 and May 1, 1947.

Those notices are not repeated here but for easy references they are listed as follows—all to be found in the February *Bulletin:* General Notice; Seminars on Architecture; Proposed Amendments of the By-laws; Continuation of State Association Memberships.

In view of the unexpected notice which The Board received last December—that the "Monarch of Bermuda" would not be available for the Convention cruise planned for June 1947—The Institute was fortunate to receive the invitation of the Grand Rapids Chapter and the Michigan architects in general to hold the 1947 Convention in Grand Rapids.

All members of The Institute and their ladies are cordially invited to attend this Convention. Last year many members were present who were not delegates. It should be borne in mind that all members who are not delegates are privileged to offer motions, present resolutions and participate in all discussions.

The Institute especially invites the younger men of the profession. It urges the chapters to elect the younger men as their delegates, and to place upon them a full share of responsibility for meeting the problems and making the decisions which bear upon the present and the future of the architectural profession.

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Hotel Reservations

The Pantlind Hotel will be official headquarters. It is well equipped to handle an Institute convention under its own roof; has available 300 single rooms with baths and 100 double rooms with baths; has an adequate room for the sessions of the Convention and for the dinner; and has ample smaller meeting rooms for other organizations and the seminars.

Your personal reservation as a member, delegate or guest should be sent direct to the Pantlind Hotel, Grand Rapids, Michigan. It should state the time of your arrival, the type of accommodation desired (single or double, and rate) and should refer to the Convention of The A.I.A. The rates per day at the Pantlind are as follows:

Room for one without bath, has private lavatory, $2.20, $2.75.
Room for two without bath, has private lavatory, $3.85, $4.40.
Suites of two single rooms with bath between, $2.75 and $3.30 per room.
Room for one with bath, $2.75, $3.30, $3.85, $4.40, $5.50.
Room for two with bath, $4.40, $5.00, $5.50, $6.05, $7.15.
Twin beds, room with bath, $5.50, $6.60, $7.70, $9.00, $10.00.
Extra large room, three single beds and bath, $9.00.
Extra large room, two double beds and bath, $9.00.
Extra large room, four single beds and bath, $10.00.
Suites of two rooms for three persons, $8.80.
Parlor suite for two persons, $13.50.

It has been agreed with the Hotel that all reservations, on account of all meetings, will be recorded in the order in which received and that the deadline will be *April 19*—ten days before the opening date. Reservations made after that date, if the capacity of the Pantlind is exceeded—and that is possible—will be allocated to one or more of the several nearby smaller first-class hotels. In such cases prompt advices will be sent to those concerned.

Tentative Program

Subject to interim developments, the Convention program now shapes up as follows:

Saturday—April 26

Seminars: Other Meetings.

Sunday—April 27

Seminars: Other Meetings.

Monday—April 28

Other Meetings: Registration.
Open Board Meeting.

A special session of The Board will be held at 8:30 p.m. on this day to give members and delegates opportunity to discuss their individual or chapter problems with The Board; or matters which, if submitted to the Convention, would normally be referred to The Board for action.

Tuesday—April 29—first day

Welcome to Michigan and to Grand Rapids.

Reports of The Board and The Treasurer.

Conferring of Honorary Corresponding Membership; presentation of Craftsmanship Medals and the Fine Arts Medal; citation of Tennessee Valley Authority for distinguished achievement in planning.

The afternoon session will be devoted to reviews of the three seminars which preceded the Convention. Those reviews will be by the chairmen of the seminars and will cover Schools, Hospitals, and Urban Planning.

The President's reception, to which all are invited, will be held at 5:30 p.m. on this day. It will be informal.

No evening session of the Convention is scheduled for Tuesday, in the thought that time should be available for personal entertainment, reunions and other purposes.

Wednesday—April 30—second day

Report of Committee on Credentials.

Voting for Officers and Directors.

Report of The Board—continued.

A Message from Tyler S. Rogers, President of The Producers' Council.

The entire afternoon session will be an open panel discussion of "Contemporary Problems in Architecture."

Walter F. Bogner of Harvard University will preside. There will be distinguished speakers on the following subjects:

"What Does Today's Building Public Want?"

"What Are the Human Requirements for Today's Buildings?"

"What Are the Needs of Industry and Mass Production?"

"What Are the Effects of Technological Changes on Design?"

"What Is the Attitude of the Young and Progressive Practitioners?"

"How Are Our Cities Rebuilt?"

Some of the speakers from outside the profession will help us to see ourselves as others see us. Those architects who have been asked to participate are "Modernists" in the best sense of the word. However, some of their convictions and conclusions concerning architecture may not meet with the approval of all who are present. Therefore, ample opportunity will be given for rebuttal and for discussion from the floor. Free expressions of opinion will be encouraged and it is hoped that this open meeting of many minds will clarify the atmosphere and expedite the processes of evolution.

On the evening of this day the Annual Dinner will be held in the Ball Room of the Pantlind Hotel. On that occasion Fellowships will be conferred; and the Gold Medal of The Institute will be presented to Eliel Saarinen of Bloomfield Hills, Michigan.

Thursday—May 1—third day

To be devoted to important organization matters, including all by-law amendments; the report of the Committee on Resolutions; action on The Board's report and on The Treasurer's report; unfinished business; new business; report of the Tellers; and the announcement of elections of Officers and Directors.

If the Convention adjourns at noon, there will be opportunity after luncheon to visit points of interest in Grand Rapids.

Program—Documents and Tickets

The official program of the Convention, with complete information concerning procedure; all documents, including The Board's report and The Treasurer's report; and such tickets of admission as may be required—will be available during or after the registration period.

Registration Procedure

Delegates, members, and guests should register with the Credentials and Registration Committee upon arrival in Grand Rapids, in the lobby of the Pantlind Hotel.

For the convenience of those arriving on Monday, April 28, the Credentials and Registration Committee will be on duty in the lobby of the Pantlind Hotel from 4:00 to 10:00 p.m.; and likewise on duty on Tuesday, April 29, from 9:00 a.m. to 12:00 noon—at which time all registration will be closed. Prompt registration will greatly assist the Committee and will save lots of time.

Registration Fee

As heretofore, and in accord with a resolution adopted by The Board at its last semi-annual meeting, a registration fee of $5.00 will be charged those who register at the 1947 Convention, subject to such individual exceptions with respect to guests, speakers, and others as The Secretary or the Committee on Credentials may make.

Transportation

Grand Rapids is served by four railroads, three bus lines, and scheduled air service with connections to all parts of the United States.

Those who travel by train, bus or plane will find adequate schedules no matter where the point of origin.

Arrangements will be made with the New York Central Railroad to operate extra sleepers from New York, Boston and Cincinnati, to arrive in Grand Rapids on Monday, April 28, the day prior to the opening day of the Convention. Requests for space in these cars should be addressed to the following New York Central representatives:

Mr. G. F. Stanton, New York Central System,
466 Lexington Avenue, New York 17, New York.
Mr. I. G. Rasp, GPA, New York Central System,
South Station, Boston, Mass.
Mr. A. C. Thompson, AGPA, New York Central
System, 115 Dixie Terminal Building, Cincinnati,
Ohio.

Those members and delegates from the southern part of the country should make reservation requests through Mr. Thompson at Cincinnati; those from New England through Mr. Rasp at Boston; and those from New York and upstate New York through Mr. Stanton at New York City.

The New York cars will serve intermediate points, as well as New York City, and delegates from those points should also contact Mr. Stanton at New York.

NOTE: Please make your reservations *on or before April 15,* so that the railroads will be able to provide an adequate number of cars. *Specify that A.I.A. space is desired.*

Architects from the Pacific Coast, the Gulf States and the Southeastern States might well consult their local transportation agents with a view to arranging for special cars, or chartered planes. It is not feasible to make such arrangements from Washington.

Travel by bus has advantages for those relatively close to Grand Rapids. The Greyhound Lines, North Star, and Short Way serve the city from all points. Local ticket offices of the Greyhound and other lines will supply complete information concerning schedules.

Grand Rapids has one of the best airports in the country, available to private planes and served commercially by the Capital Airlines—P.C.A.

The splendid highway system of Michigan encourages travel by private automobile. The Pantlind Hotel has garage facilities for the indoor storage of 500 cars at reasonable rates. If you drive your own automobile a uniformed attendant will be ready to take it at the door of the Hotel and another will take your baggage—a complete service of maximum convenience.

ASSOCIATIONS AND OTHER GROUPS—MEETINGS

Meetings of associations and other groups to be held in Grand Rapids prior to or during the Convention of The Institute are as follows:

The Association of Collegiate Schools of Architecture

The thirty-third annual meeting of the Association will be held in the Pantlind Hotel on April 27 and 28—the two days immediately preceding the Convention. An invitation to attend is extended to faculty members of all schools, to members of The Institute, and to others interested in architectural education. The Executive Committee of the Association will meet on April 26.

Correspondence may be addressed to Paul Weigel, Secretary, care of Kansas State College, Manhattan, Kansas.

The National Council of Architectural Registration Boards

The Council will meet in the Pantlind Hotel on April 27 and 28—the two days immediately preceding the Convention.

Correspondence may be addressed to William L. Perkins, Secretary, National Council of Architectural Registration Boards, Chariton, Iowa.

The National Architectural Accrediting Board

The Accrediting Board will meet in the Pantlind Hotel from April 27 to May 1, inclusive. Place and hours of meetings will be posted.

Correspondence may be addressed to Sherley W. Morgan, Secretary, The National Architectural Accrediting Board, care of School of Architecture, Princeton University, Princeton, New Jersey.

Meeting of Chapter Officers

All officers of chapters of The Institute attending the Convention are invited to a meeting on Monday, April 28, the Pantlind Hotel. The hour of the meeting and the room in which it will be held will be posted in the lobby of the hotel.

Conference of State Associations

A special notice concerning this meeting appears elsewhere in this *Bulletin.*

The Producers' Council, Inc.

The Producers' Council will meet on April 29 and 30 in the Pantlind Hotel.

Correspondence may be addressed to Andrew L. Harris, Executive Secretary, The Producers' Council, Inc., 815—15th Street, N.W., Washington 5, D. C.

BOARD MEETINGS

Annual Meeting

The Pantlind Hotel—April 24, 25, 26, and 27.

Communications for The Board at this meeting should be addressed to The Secretary of The Institute, at The Octagon in Washington, D. C., and should be received by him not later than April 15—prior to the closing of the agenda of The Board.

Open Meeting

The Pantlind Hotel—April 28.

The purpose of this meeting is to give to members and delegates opportunity to discuss their individual or chapter problems with The Board; or matters which, if submitted to the Convention, would normally be referred to The Board for action.

The hour and room of this meeting will be posted in the lobby of the hotel.

Organization Meeting

The Plantlind Hotel—May 2.

Communications for The Board at this meeting should be addressed to The Secretary of The Institute, care of the Pantlind Hotel, Grand Rapids, Michigan, and should be received by him not later than 9:00 a.m. on May 1—the day prior to the meeting.

NOMINATIONS OF OFFICERS

The offices to becomes vacant at the time of the 79th Convention, are those of President, Vice-President, Secretary, and Treasurer.

An official notice concerning nominations for these offices and the procedure for making them appeared in the February number of the *Bulletin.*

All nominations received at The Octagon on or before March 20—which was the last day for filing nominations by petition—are listed as follows:

For President and Director:

Douglas Wm. Orr, New Haven, Connecticut. By members of the Baltimore, Boston, Central Valley of California, Connecticut, Detroit, Florida Central, Florida North, Florida South, Georgia, Montana, Northern California, Oregon, San Diego, Southern California, Virginia and Washington, D. C. Chapters.

For Vice-President and Director:

John S. Bolles, San Francisco, California. By members of the Central Valley of California, Northern California, and Southern California Chapters.

Samuel E. Lunden, Los Angeles, California. By members of the Baltimore, Boston, Connecticut, San Diego, and Southern California Chapters.

Searle H. Von Storch, Scranton, Pennsylvania. By members of the Detroit, Florida South, New York, Pennsylvania Society of Architects, and Westchester Chapters.

For Secretary and Director:

Alexander C. Robinson, III, Cleveland, Ohio. By members of the Baltimore, Boston, Connecticut, and Detroit Chapters.

For Treasurer and Director:

Charles F. Cellarius, Cincinnati, Ohio. By members of the Baltimore, Boston, Connecticut, and Detroit Chapters.

REGIONAL DIRECTORS—NOMINATION PROCEDURE

Regional Directors are to be elected for three-year terms for the Middle Atlantic, Great Lakes, and Western Mountain Districts.

The Secretary will report to the Convention the names of any nominations for these Directorships received at The Octagon on or before March 15, as subsequently determined by letter ballots returned by corporate members in the respective districts.

It will be recalled that due to the postponement of the 1944 Convention (by Governmental order, because of war conditions) the Directors for the Middle Atlantic, Great Lakes, and Western Mountain Districts—whose terms normally would have expired in 1944—each served an additional year. Their successors, the present Regional Directors for the Districts named, have each served for two years.

Counsel of The Institute has ruled that the present Regional Directors for the Districts named, who were elected at the 1945 Convention, have been filling unexpired terms. Therefore, they are eligible for reelection for three-year terms. The relevant By-law provision is Chapter VIII, Article 2, Section 2, paragraph (c) (page 21).

STATE ASSOCIATION DIRECTOR—NOMINATION PROCEDURE

Under the regular procedure of The Institute the conference of state associations to be held on the day preceding the opening of the Convention will select a nominee for the State Association Directorship. The nominee so selected will be nominated from the floor of the Convention by a state delegate.

Counsel has ruled that the present State Association Director has been serving an unexpired term which he was elected to fill at the 1945 Convention. Therefore, he is eligible for reelection as State Association Director for a term of three years.

NOMINATIONS FROM THE FLOOR

If any chapter proposes to have its delegates make nominations from the floor—of Officers or Regional Directors—it is suggested that it notify the other chapters in advance of the Convention so that all chapters may give consideration to such proposed nominations in instructing their delegates.

THE LADIES ARE CORDIALLY INVITED

The Michigan architects and the Officers of The Institute join in urging delegates and members to bring their wives and other feminine members of the family to this Convention. The Ladies Committee, on behalf of the Michigan architects, will be on duty throughout the meeting to make the visitors at home.

In other words, the ladies are cordially invited, even urged, to be present at this Convention and to attend all of its sessions, including the general meetings, the formal dinner and other social events. The party will not be complete without them.

NEW MEMBERS AND YOUNGER MEMBERS ARE CORDIALLY INVITED

In concluding this notice and with some repetition, The Secretary desires to emphasize the hope of The Board and the Officers of The Institute that this will be a well attended convention. The program is a good one, there will be full opportunity for the expression of individual opinion, and there are some important decisions to be made.

Also, there will be social events, informal gatherings, opportunity to meet architects from other parts of the country and to make new friends, and opportunity to broaden the personal outlook.

The membership of The Institute has more than doubled in the past five years. Many of the new members have never attended a convention. Were it feasible each and every one of them would receive a personal invitation to be present—as a member if not as a delegate. Let the officers of your chapter know that you plan to attend, make your reservation with the hotel, come and take part in this annual meeting of the architectural profession.

ALEXANDER C. ROBINSON, III
Secretary

Conference of State Associations

Notice of Meeting

A conference of representatives of the state association members of The Institute will be held in the Pantlind Hotel, Grand Rapids, Michigan, on April 28, 1947.

Those members are:

Louisiana Architects Association
Massachusetts State Association of Architects
Michigan Society of Architects
Minnesota Association of Architects
Mississippi Association of Architects
The Missouri Association of Architects
Nebraska Architects Association
New Hampshire Society of Architects
The New York State Association of Architects
The Texas Society of Architects
The State Association of Wisconsin Architects

The first session will be called to order at 2 o'clock on the afternoon of April 28, and a session will be held in the evening if necessary.

Among the matters to be considered will be the proposal of The Board of Directors of The Institute, to be submitted to the 1947 Convention, that the state association membership class be continued until January 1, 1949—in order to permit the completion of the unification of the architectural profession. The Board is making this proposal on the recommendation of the state association members made at their meeting in Miami Beach last May. In this connection see the notice appearing on page 7 of the February 1947 *Bulletin of The A.I.A.*

Also, the conference will have the duty of selecting a nominee for the State Association Directorship. The nominee so selected will be nominated from the floor of the Convention by a state delegate. As relevant see the notice on page 4 of the February *Bulletin*

Every state association member is cordially invited and urged to send representatives to this national conference. It is most important to have a good attendance at this time.

Branson V. Gamber,
State Association Director.

High Quality Talent for Seminars' Success Depends Upon Member Participation

A new and significant feature of the Grand Rapids Convention will be the Seminars, held in the Convention hotel on Saturday and Sunday, April 26 and 27.

The schedule is arranged to take as little time as possible out of the architect's busy working week. It will be well worth taking some time to learn from recognized experts the essentials of School and Hospital design and the Architect's place in Urban Planning.

The main speakers are scheduled at separate hours so that members who register for one seminar may audit the lectures of the other two groups. There will be ample time for discussion and questions.

The quality of these seminars is assured by the calibre of the leaders, but their success and the possibility of repeating in subsequent conventions depend upon participation by a worthwhile number of members.

Among the principal speakers from outside the profession will be a noted economist and city plan consultant, a stimulating, far-seeing and practical authority on airports, three outstanding educators specially competent to speak on school buildings, and men of similar authority and scope in the field of hospital design. The Chairmen and other architects among the speakers will share the knowledge gained from their extensive practice in these fields.

The registration and tuition fee for the Seminars is $25 and may be sent to The Octagon now. Please direct all communications on Seminar business to the Department of Education and Research.

Walter A. Taylor, *Director,*
Department of Education and Research.

Notice of Number of Delegates to the 1947 Convention

APRIL 29, 30 AND MAY 1, 1947, GRAND RAPIDS, MICHIGAN

THE Secretary hereby gives notice to the members of each chapter of the number of member delegates they are entitled to have represent them, and the total number of votes they are entitled to have cast for them, at the 1947 Convention of The American Institute of Architects to be held in Grand Rapids, Michigan, April 29, 30, and May 1, 1947 and gives notice to each state association member and each state organization of the number of delegates it is entitled to have represent it, and the total number of votes each of the state association members and state organizations is entitled to have cast for it, at the said meeting. Number of delegates and votes to be adjusted as of March 30, 1947.

The number of member delegates and the total number of votes in each case is based on the number of members of the chapter who are in good standing, according to the records in the office of The Secretary on March 15, 1947.

The number of state delegates is determined by the number of voting members in each state association member as of January 1, 1947.

ELECTING MEMBER DELEGATES

Electing delegates is an important duty of membership in The Institute, for both member and state delegates are in effect the proxies of the members, authorized to act for them at Institute meetings. Member delegates represent the individual members of The Institute and not its chapters, whereas state delegates represent their organizations and not the individual members of their organizations. Consequently the methods of electing them are not the same.

Appointments of member delegates by chapter executive committees and assumptions of delegateships by officers of chapters, ex officio in any manner, do not constitute an election by members.

The secretary or the president of the chapter must certify the election of the member delegates, certifying them in the order of their election up to the full number that are entitled to be accredited to represent the members of the chapter. Each certification will be on a card obtained from The Secretary of The Institute and each elected delegate must present his certification card to the Credentials Committee at the convention.

A member delegate cannot transfer his certification to any other delegate or member nor transfer his right to vote to any other delegate.

The Institute, by providing the following procedures, has assured the members of each chapter who are entitled to be represented at a meeting that they may be so represented under any circumstances that may arise:

(a) If only one member delegate from a chapter is accredited to the meeting he will be accredited to cast the total number of votes that the members of the chapter are entitled to have cast for them;

(b) If the members of a chapter cannot be represented at the meeting by one of themselves duly elected a member delegate, then they may be represented by a member delegate from another chapter or by an officer or director of The Institute, who may cast the total number of votes which the members of that chapter are entitled to have cast for them; *provided*, that such other member delegate, officer, or director has been duly elected for that purpose by the chapter members and his election has been duly certified by the secretary or the president of the chapter.

ALEXANDER C. ROBINSON, III
Secretary

(*See tabulation on next page*)

Chapters, Delegates and Votes

THIS TABLE AS OF MARCH 15, 1947

Column 1	Column 2	Column 3
NAMES OF CHAPTERS BY STATES	Number of MEMBER DELEGATES entitled to be elected by the members of each Chapter named in Column 1. *As of March 15*	Total Number of VOTES that may be cast for the members of each Chapter named. *As of March 15*
Alabama		
Alabama Soc. of Architects	7	7
Arizona		
Arizona	2	2
Arkansas		
Arkansas	4	4
California		
Central Valley Chapter of California	4	4
Northern California	12	12
Southern California	18	18
San Diego	4	4
Santa Barbara	1	1
Colorado		
Colorado	6	6
Connecticut		
Connecticut	7	7
Delaware		
Delaware	4	4
District of Columbia		
Washington, D. C.	10	10
Florida		
Florida Central	3	3
Florida North	6	6
Florida South	8	8
Georgia		
Georgia	8	8
South Georgia	2	2
Territory of Hawaii		
Hawaii	3	3
Idaho		
In territory of Utah and Spokane Chapters	—	—
Illinois		
Central Illinois	5	5
Chicago	16	16
Southern Illinois	2	2
Indiana		
Indiana Soc. of Architects	7	7
Iowa		
Iowa	6	6
Kansas		
Kansas	6	6
Kentucky		
Kentucky	6	6
Louisiana		
New Orleans	6	6
North Louisiana	2	2
Maine		
Maine	2	2
Maryland		
Baltimore	8	8
Massachusetts		
Boston	15	15
Michigan		
Detroit	20	20
Grand Rapids	6	6
Saginaw Valley	2	2
Minnesota		
Minnesota	6	6
St. Paul	3	3
Mississippi		
Mississippi	4	4
Missouri		
Kansas City	6	6
St. Louis	8	8
Montana		
Montana	3	3
Nebraska		
Nebraska	2	2
Nevada		
In territory of Central Valley Chapter of California	—	—
New Hampshire		
In territory of Boston Chapter	—	—
New Jersey		
New Jersey	9	9
New Mexico		
New Mexico	1	1
New York		
Albany	3	3
Bronx	5	5
Brooklyn	8	8
Buffalo-Western N. Y.	7	7
Central New York	9	9
Long Island Society	3	3
New York	27	27
Queens	3	3
Staten Island Society of Architects	2	2
Westchester	7	7
North Carolina		
North Carolina	7	7
North Dakota		
In territory of Minnesota Chapter	—	—
Ohio		
Cincinnati	7	7
Cleveland	10	10
Columbus	7	7
Dayton	5	5
Eastern Ohio	4	4
Toledo	3	3
Oklahoma		
Oklahoma	6	6
Oregon		
Oregon	6	6
Pennsylvania		
Pennsylvania Society of Architects	39	39
Rhode Island		
Rhode Island	5	5
South Carolina		
South Carolina	5	5
South Dakota		
In territory of Minnesota Chapter	—	—
Tennessee		
Tennessee	8	8

Column 1	Column 2	Column 3
Texas		
Central Texas	4	4
Dallas	6	6
Fort Worth	3	3
South Texas	9	9
Texas Coastal Bend	1	1
Texas Panhandle	1	1
West Texas	5	5
Utah		
Utah	5	5
Vermont		
In territory of Boston Chapter	—	—
Virginia		
Virginia	7	7
Washington		
Spokane	2	2
Washington State	8	8
West Virginia		
West Virginia	4	4
Wisconsin		
Wisconsin	8	8
Wyoming		
Wyoming	1	1
Totals	510	510

Column 1	Column 2	Column 3
NAMES OF STATE ASSOCIATION MEMBERS AND STATE ORGANIZATIONS	Number of DELEGATES entitled to represent each state association or organization named in Column 1; *if in good standing*	Number of VOTES that may be cast as a unit by delegate representing each state association member or organization *in good standing*
*The Alabama Association of Architects	—	—
*California Council of Architects	—	—
*Florida Association of Architects	—	—
*Architects Association of Illinois	—	—
*Indiana Society of Architects	—	—
*Louisiana Architects Association	—	—
Massachusetts State Association of Architects	8	8
Michigan Society of Architects	11	11
*Minnesota Association of Architects	—	—
*Mississippi Association of Architects	—	—
The Missouri Association of Architects	2	2
*Nebraska Architects Association	—	—
*New Hampshire Society of Architects	—	—
*The New York State Association of Architects	—	—
*Architects Society of Ohio	—	—
The Texas Society of Architects	8	8
*The State Association of Wisconsin Architects	—	—
Totals	29	29

Note: The unit vote of a state association member or state organization must be cast by a corporate member of The Institute.

* Number of delegates undetermined as of March 15, 1947.

Principles of Professional Practice

NOTICE OF PROPOSED NEW DOCUMENT

To the Members of
the American Institute of Architects:

At the 1946 Convention, in its report to the delegates, The Board of Directors discussed the opening paragraphs of the present "Principles of Professional Practice" which state, in very general terms, the conditions that should govern the ethical practice of architecture.

It was suggested to the 1946 Convention that the specific rules which follow those paragraphs might require modification in the light of changing conditions that confront the architect and The Institute; or that it might be better to amplify the general statement and omit the specific rules entirely.

The Convention, in approving The Board's report, approved its suggestion that the matter be referred to a special Committee on Principles of Professional Practice, with instructions to report. That action was taken.

The special Committee has submitted a general revision of the present "Principles of Professional Practice" which has been reviewed, amended, and approved by the Officers and The Executive Committee on behalf of The Board.

By means of this notice the proposed revision is submitted to the chapters and to the membership for review in advance of 1947 Convention action.

The Board hereby gives notice that at the next Convention of The Institute, to be held in Grand Rapids, Michigan, on April 29, 30 and May 1, 1947, the revised new document printed herein as Part II will be offered for adoption—to take effect on May 1, 1947; and to completely replace all of present A.I.A. Document No. 225 entitled "Principles of Professional Practice."

For convenient study and comparison the present document and the proposed document to take its place are printed hereafter as Parts I and II of this notice.

Alexander C. Robinson, III
Secretary.

PART I OF PRECEDING NOTICE

It is proposed that this present document be replaced by a revised document which is printed as Part II

The American Institute of Architects—*A.I.A. Document No. 225*

Principles of Professional Practice

The American Institute of Architects, seeking to maintain a high standard of practice and conduct on the part of its members as a safeguard of the important financial, technical, and esthetic interests entrusted to them, offers the following advice relative to professional practice:

The profession of architecture calls for men of the highest integrity, business capacity and artistic and technical ability. The Architect is entrusted with financial undertakings in which his honesty of purpose must be above suspicion; he acts as professional adviser to his client and his advice must be absolutely disinterested; he is charged with the exercise of judicial functions as between client and contractors and must act with entire impartiality; he has moral responsibilities to his professional associates and subordinates; finally he is engaged in a profession which carries with it grave responsibility to the public. These duties and responsibilities cannot be properly discharged unless his motives, conduct, and ability are such as to command respect and confidence.

Upon the foregoing basic principles the experience of The Institute leads it to advise in respect to specific instances as follows:

1. The relation of an Architect to his client is one depending upon good faith. An Architect will explain the conditional character of estimates made before final drawings and specifications are complete and will not by careless statements mislead a client as to the probable cost of a building. If the Archi-

tect guarantees an estimate he becomes legally responsible and he should not make any guarantee which affects the quality of his advice.

2. The contractor depends upon the Architect to guard his interests as well as those of the client. An Architect will condemn workmanship and materials which are not in conformity with the contract documents but it is also his duty to give every reasonable aid toward a complete understanding of these documents so that mistakes may be avoided. He will not call upon a contractor to make good oversights and errors in the contract documents.

3. An exchange of information between Architects and those who supply and handle building materials is encouraged and commended but the use of the free engineering service which is offered by manufacturers and jobbers of building materials, appliances and equipment is accompanied by an obligation which may become detrimental to the best interest of the owner.

4. The American Institute of Architects has set forth a schedule or guide by which the proper professional charges may be determined. The Architect's charges for his professional service shall be made to the client only, and he will not receive commissions, fees, gifts, favors or any substantial service from a contractor, or from any interested person other than the client. He will not knowingly compete with a fellow Architect on a basis of professional charges.

5. An Architect in his investments and in his business relations outside of his profession must be free from financial or personal interests which tend to weaken or discredit his standing as an unprejudiced and honest adviser, free to act in his client's best interests.

6. An Architect will not indulge in false publicity; nor take part, nor give assistance in obtaining advertisements or other support toward meeting the expense of any publication illustrating his work; nor will he permit others to solicit such advertising or other support in his name.

Action contrary to these principles is disapproved as not in accordance with the canons of good taste and good repute, and therefore subject to discipline.

7. An Architect may introduce to a possible client the service which he is able to perform but will not, except under unusual circumstances, offer to continue this service without compensation until it has been approved; and in no case will he offer this service in competition with others except as provided in Article 9.

8. An Architect will not falsely or maliciously injure, directly or indirectly, the professional reputation, prospects or business of a fellow Architect. He will not attempt to supplant another Architect after definite steps have been taken by a client toward his employment; nor will he undertake a commission for which another has been previously employed until he has determined that the original employment has been definitely terminated.

9. The American Institute of Architects has issued a Circular of Information in regard to Competitions. An Architect will take no part in a competition which does not include the provisions which experience has found to be necessary if the best interests of the owner and of the Architect are to be safeguarded.

No set of rules can be framed which will particularize all the duties of the Architect in his various relations with his clients, with contractors, with his professional brethren and with the public. The principles that have been outlined should, however, together with such circulars and codes as The Institute may from time to time promulgate, govern the conduct of members of the profession and should serve as a guide in circumstances other than those enumerated. Since adherence to these principles is the obligation of every member of The American Institute of Architects, any deviation therefrom, unless specifically excepted, is subject to discipline in proportion to its seriousness. The Judiciary Committee and finally The Board of Directors of The American Institute of Architects shall have sole power of interpreting these Principles of Professional Practice and their decision shall be final, subject to the provisions of the by-laws.

Note: This document was approved and adopted by The Board of Directors of The American Institute of Architects at its semi-annual meeting on November 17-19, 1942; amended at the semi-annual meeting of The Board of Directors on December 1-3, 1943; and amended by the Seventy-seventh Convention, April 24-25, 1945. It supersedes Part I of the repealed Standards of Practice—A.I.A. Document No. 300.

PART II OF PRECEDING NOTICE

It is proposed that this revised document replace the present document which is printed as Part I.

CODE OF PROFESSIONAL ETHICS

PREAMBLE

THE profession of architecture calls for men of the highest integrity, business capacity and artistic and technical ability. The Architect is entrusted with financial undertakings in which his honesty of purpose must be above suspicion; he acts as professional adviser to his client and his advice must be absolutely disinterested; he is charged with the exercise of judicial functions as between client and contractors and must act with entire impartiality; he has moral responsibilities to his professional associates and subordinates; finally he is engaged in a profession which carries with it grave responsibility to the public. These duties and responsibilities cannot be properly discharged unless his motives, conduct, and ability are such as to command respect and confidence.

That a high standard of practice and conduct be maintained throughout the profession, The American Institute of Architects formulates the following basic principles for the guidance of the practicing Architect:

A. Advice and counsel constitute the services of the profession. Given in verbal, written or graphic form, they are normally rendered in order that buildings with their equipment and the areas about them, in addition to being well suited to their purposes, well planned for health, safety, and efficient operation and economical maintenance and soundly constructed of materials and by methods most appropriate and economical for their particular uses, shall have a beauty and distinction that lift them above the commonplace.

It is the purpose of the profession of architecture to render such services from the beginning to the completion of a project.

B. The fulfillment of that purpose is advanced every time an Architect renders the highest quality of service he is capable of giving. Particularly should his drawings, specifications, and other documents be complete, definite and clear concerning his intentions, the scope of the contractors' work, the materials and methods of construction to be used therefor, and the conditions under which the construction work is to be completed and paid for.

C. The relation of an Architect to his client depends upon good faith. An Architect shall explain the exact nature and extent of his services and the conditional character of estimates made before final drawings and specifications are complete.

D. The contractor depends upon the Architect to guard his interests as well as those of the client. An Architect will condemn workmanship and materials which are not in conformity with the contract documents but it is also his duty to give every reasonable aid toward a complete understanding of those documents so that mistakes may be avoided. He will not call upon a contractor to make good oversights and errors in the contract documents.

E. An exchange of information between Architects and those who supply and handle building materials is commended and encouraged.

An Architect in his investments and in his business relations outside of his profession must be free from financial or personal interests which tend to weaken or discredit his standing as an unprejudiced and honest adviser, free to act in his client's best interests.

The use of free engineering service offered by manufacturers and jobbers of building materials, appliances and equipment is accompanied by an obligation which may become deterimental to the best interest of the owner.

F. The Architect may offer his services to anyone on the generally accepted basis of commission, salary or fee, as Architect, consultant, adviser, or assistant, provided that he rigidly maintains his professional integrity, disinterestedness and freedom to act. The status of his employment does not impugn his competence or probity.

He will refrain from associating himself with, or allowing the use of his name by, any enterprise of questionable character.

G. Architects should unite in fellowship in their professional organizations and do their full part of the work of those organizations. They should share in the interchange of technical information and experience.

H. The Architect should seek opportunities to be of constructive service in civic affairs, and to the best of his ability advance the safety, health, and wellbeing of the community in which he resides by promoting therein the appreciation of good design, the value of good construction, and the proper placement of structures and the adequate development and adornment of the areas about them.

I. The Architect should inspire the loyal interest of his employees, providing suitable working conditions for them, requiring them to render competent and efficient services, and paying them adequate and just compensation therefor.

J. The Architect should accept mentorship of the young men who are entering the profession, leading them to a full understanding of the functions, duties, and responsibilities of Architects.

K. Every Architect should do his full part to forward justice, courtesy, and sincerity in his profession. It is incumbent on him in the conduct of his practice to maintain a wholly professional attitude toward those he serves, toward those who assist him in his practice, toward his fellow Architects, and toward the members of other professions and the practitioners of other arts. He should respect punctiliously the hallmarks that distinguish professional practice from non-professional enterprise.

PRINCIPLES OF PROFESSIONAL PRACTICE

BEING A STANDARD OF CONDUCT ESTABLISHED BY THE AMERICAN INSTITUTE OF ARCHITECTS, AND BINDING ON ITS MEMBERSHIP

1. An Architect is remunerated for his services solely by his professional fees and is debarred from any other source of compensation in connection with the works and duties which are entrusted to him.

2. The Architect practicing professionally may not act as principal, partner, manager or representative of any firm engaged in the erection or financing of buildings, for which he performs any architectural services.

3. An Architect may propose to a possible client the service which he is able to perform but shall not, except under unusual circumstances, offer this service without compensation.

4. An Architect shall not submit free sketches except to an established client.

5. An Architect shall not knowingly compete with a fellow Architect on a basis of professional charges, nor shall he offer his services in competition with others except as provided in The Institute's Competition Code.

6. An Architect shall not falsely or maliciously injure the professional reputation, prospects or business of a fellow Architect. He will not attempt to supplant another Architect after definite steps have been taken by a client toward his employment; nor will he undertake a commission for which another has been previously employed until he has determined that the original employment has been definitely terminated.

7. An Architect who has been officially consulted with the view of acting as professional adviser in a competition, or who has so acted, cannot, if the competition is abandoned, be employed as architect for this project.

8. If the Architect guarantees an estimate, he becomes legally responsible and he shall not make any guarantee which affects the quality of his advice.

9. An Architect shall avoid exaggerated or misleading publicity. He shall not take part, nor give assistance, in obtaining advertisements or other support toward meeting the expense of any publication illustrating his work; nor will he permit others to solicit such advertising or other support in his name.

10. Since adherence to the principles herein enumerated is the obligation of every member of The American Institute of Architects, deviation therefrom is subejct to discipline in proportion to its seriousness. The Judiciary Committee and finally the Board of Directors of The American Institute of Architects shall have sole power of interpreting these Principles of Professional Practice and their decision shall be final, subject to the provisions of the by-laws.

Department of Public and Professional Relations

EDMUND R. PURVES, Director

THE Bulletins issued from time to time by this Department had their origin in news letters that were first sent only to the Regional Directors of The Institute. This was in 1942. Later on, the distribution was increased to include the entire membership of The Institute. In the course of years, and with the extension of the activities and widening of the scope of interest of this office, the Bulletins have grown in size—and we hope in interest. The task of preparing and distributing these Bulletins reached such proportions as to tax the administration of this Department.

We are now able—by reason of the combining of our Bulletins with those of the Administrative, and Education and Technical Research Departments—to be able to send them to you more frequently and in a more attractive form.

This, the first *Bulletin* appearing under the new arrangement, comes so close upon the issuance of Bulletin No. 39, that we are not able to furnish you at this time with detailed information on all legislative and other items that might be of interest.

United Nations Center

THE position of The American Institute of Architects with respect to the United Nations Center has been subject to misunderstanding and on occasion to misrepresentation. In order to clarify the position of The Institute and to keep the members informed, President James R. Edmunds, Jr., has made the following statement:

"In view of the architectural significance of the United Nations Center to our profession, as well as to the whole world, a statement on behalf of The American Institute of Architects is opportune.

In December, 1945, The Board of Directors appointed a Committee on the United Nations Center, with Eric Gugler of New York as Chairman. The personnel of this Committee was representative of all parts of the United States, and of all the major trends of architectural thought in this country. The Committee's duties at that time were set forth as follows:

> 'To endeavor to establish a program which will assure foreign and domestic architectural participation in the designing of the buildings and environment which will compose the United Nations Center.'

It might well be made clear at this point that neither The Institute nor its Committee were officially concerned with the choice of a site. Such choice was entirely a matter for the General Assembly of the United Nations or its delegated Committees.

On February 19, 1947, on behalf of The Executive Committee of The Institute, the following telegram was sent by me to the President of each Chapter, State Association and State Organization of The A.I.A.:

> 'Letters being circulated for architects' signatures re United Nations site selection and appointment of architect as Director of Planning. Stop. These letters evidence lack of complete understanding as to situation. Stop. Institute Officers conferring with United Nations Officials. Stop. Recommend no action re letters by Institute members pending further advice to Chapters.'

In accordance with the telegram's indication of further advice to follow, there is this to be said:

On Thursday, February 27th, Mr. Trygve Lie, Secretary General of the United Nations, and Mr. Wallace K. Harrison, Director of Planning of Permanent

Headquarters of the United Nations, met at The Octagon with myself, Director Kaelber, Chairman Gugler, and Messrs. Kemper, Saylor and Purves of The Institute's staff.

The Secretary General explained, in some detail, the problems confronting the United Nations insofar as adequate quarters and the needs of its staff are concerned. The Secretary General's staff—some 3,000 in number—was originally housed in one of the buildings at Hunter College, New York. From these quarters, they were obliged to move to a factory building at Lake Success, Long Island. The staff is now laboring under particularly difficult conditions such as would be unthinkable for any normal business organization.

It was realized by the representatives of The A.I.A. that this marked unsuitability of temporary headquarters would not of itself be so serious were it not for the fact that it is provocative of serious question as to the basic suitability of the United States as a permanent home for the organization. The necessity of obtaining adequate permanent accommodations as soon as possible is of concern to all, throughout the world, who are solicitous for the success of the United Nations.

It has been the Secretary General's task to develop for submission to the General Assembly next Autumn a program calling for the provision of suitable quarters at the earliest possible moment, on the site offered to and accepted by the United Nations on Manhattan Island. This program, it should be emphasized, is merely that—and is subject to acceptance or rejection by the General Assembly at its next meeting in the Fall of 1947.

The Secretary General's action, in view of the above, was to appoint a Director of Planning, who will be assisted by representative architects selected by the member countries. The Director of Planning, Wallace K. Harrison, and his associates from this and other member countries, are engaged on a salary basis to develop a program by which the United Nations could be adequately housed in the shortest possible time.

Unquestionably, one of the elements of this program is the immediate designing and building of one or two office buildings on the site selected. This, of course, calls for a general plan of the site. It is possible that, having satisfied the immediate needs of the Secretary General's staff, the Director of Planning and his international advisers may find that some substantial element of the project might be the subject of an international architectural competition. Such a conclusion would be in accordance with The Institute's hopes, as have been expressed freely and unanimously from the beginning.

In order to be of all possible service to the United Nations, and in particular to its immediate needs, I (following the meeting with Secretary General Lie) appointed a committee to cooperate with and to advise with the Secretary General and the Director of Planning in their architectural problems. This Advisory Committee to the Director of Planning of the Permanent Headquarters of the United Nations consists of: Ralph Walker, Edgar I. Williams and Eric Gugler, Chairman.

It is hoped that by the time of The Institute's Convention in Grand Rapids in late April, a pattern will have been established for progressively solving the many architectural problems of the United Nations with regard to its Headquarters."

The Architects' Interest in Labor Problems

SINCE the issuance of Bulletin No. 39, we have testified before the Senate Committee on Labor and Public Welfare on March 4th, and the House Committee on Education and Labor on March 8th, with respect to the interest of the architectural profession in the labor problems now confronting the country. Mr. Purves appeared before the Senate and House Committees as a member of a panel of representatives of the professional elements in the Construction Industry.

It is believed that this is the first time the major Committees of the Congress have been made acquainted with the concern of the professional people with the problems involved. It is our opinion that legislation on labor enacted by this Congress will have a profound effect on the welfare of the professions.

The Honorable Frederick A. Muhlenberg, Congressman from the 13th Pennsylvania District, and a member of The A.I.A., in an extension of his remarks on the floor of the House of Representatives incorporated our Statement in the Congressional Record.

Following is a transcript from the *Congressional Record* of March 6th :

STATEMENT TO SENATE COMMITTEE ON LABOR AND PUBLIC WELFARE BY THE AMERICAN INSTITUTE OF ARCHITECTS ON MARCH 4, 1947

Extension of remarks of Hon. Frederick A. Muhlenberg of Pennsylvania in the House of Representatives, Thursday, March 6, 1947

MR. MUHLENBERG. Mr. Speaker, because architects are representatives of professional men who direct much commercial activity, partly themselves, partly through subordinates; because many of these subordinates have been approached by union organizers; because a few so-called unions, actually societies or groups already formed by their employees have been solicited by national union organizations with a view to application which would eventually lead to their representation by nonprofessional officers of the unions it seems important to extend in the *Record* testimony given before the Labor and Public Welfare Committee of the senior body March 4, 1947, by an official representative of The American Institute of Architects (Edmund R. Purves).

The statement follows:

The American Institute of Architects is the only national organization representing the profession of architecture. It includes within its organization 77 chapters, 11 State associations, and 6 State organizations, representing every part of the United States and its possessions. It is therefore competent to express the opinion of the profession as a whole. We are honored to appear before your committee with representatives of the engineering professions.

We would like to make some observations on the nature of the architect and of his services. Architecture is a profession. Its sole product is professional service. The same is true of other professions. This service with architects takes the tangible forms of drawings and specifications, which frequently are erroneously termed "blueprints."

The average architectural office is conducted on a basis not customarily found in business or commercial enterprises. The architect principal generally engages younger men whom he trains and who, in normal times, stay with him over a period of years, increasing their earning power and assuming a continually more responsible position in the employer's office. Many of them become architects or principals themselves. Personal understanding and freedom from restraint are characteristic of the relationship between employer and employee in the offices.

In order to continue to render an ever-increasing service to the general economy, the architect's activities have expanded, and, with the increasing of governmental acts and regulations covering all fields of endeavor, professional men find themselves coming within the scope of some of the characteristics of a commercial enterprise. However, the basic patterns of professional service, characteristic of both employer and employee, do not lend themselves altogether to the same formula or standards which maintain in commercial and industrial enterprises.

For instance, the work of the architect and office employee cannot be governed on a quantitative basis. The standards that apply to the production of materials cannot be adopted for use in the professional office. No standard could be established as to the number of drawings a draftsman should produce each day or the number of pages of specifications he should write, or the number of items he should supervise in the field. Service rendered by the employee is like that of the employer, essentially intellectual and varied in character. Creative ability, originality, and individual talent are important in nearly every individual in the architectural profession and cannot be measured on a quantitative basis. Regimentation of those qualities is impossible.

It is also found that the daily work and duties of the employer and employee overlap. An employer, for instance, may often work beside his own men, doing the same work as they do. He often requires the employee to take over some of his duties, such as conferences with clients and supervision of construction. An assignment of definite duties is not practical. Only the individual office can determine for itself how it can best render its particular service to the client.

You may question why we are appearing before your committee. You may wonder if we, as professional men, are facing the problems which we know many of your other witnesses have reviewed for you. We assure you that, in a sense, we are facing many of those problems, both directly and indirectly. We have a comprehensive interest in the matter before your committee. This interest takes on two general aspects. The first might be called "indirect interest."

We, as architects, are an element of the construction industry, which industry in itself constitutes some 12 percent of the total national economy. In that industry, our profession is, numerically speaking, small. Our importance in the industry is not proportionate to our relatively small number. It is due to our study and our solution of building problems that our country takes on the appearance which it constantly assumes.

Through the initiative of the design element, projects often receive their first incentive.

We are interested in seeing the plans which we engage upon result in finished products. We are interested in promoting general welfare and progress. We plan for the realization of that objective. We are, therefore, affected by any labor disturbances in the construction industry. As the industry itself rises and falls so do our activities, and so does the welfare of those who are employed by us. We feel we have a very great interest in the proper solution of labor problems in the construction field.

The other phase of our interest may be cited as "direct interest"; and this, in turn, resolves itself into two aspects. The first of these is our consideration for those members of our profession who may themselves be members of units organized for the purpose of collective bargaining. We doubt if there are many architects found in this category. However, regardless of the number of our men who may find themselves in unions, the principle remains the same, and our concern is as great. There are some architects on salaries in corporations, and we may assume that a number of them are members of collective bargaining units. There are also many architects in direct Government employ, not only Federal, but also State and municipal as well. Probably many of these architects belong to collective bargaining units made up of governmental employees. For these men who are members of our profession, we wish to see established three conditions affecting their lives and their welfare.

Let us observe at this point that we recognize the right of any group of citizens of the United States to form themselves into units for the purpose of collective bargaining. We do not seek to deny the right to do so. We do not seek to make the assertion of that right cause for discrimination.

We urge, first of all, that no professional employee should be forced, against his desire, to join a labor organization as a condition of employment. It seems to us that the foregoing is a simple corollary of the established right of organizing for collective bargaining.

As a second condition, we ask that no professional collective-bargaining group ever, at any time, be forced to affiliate itself with a nonprofessional labor organization. The determination of affiliation should be left entirely with the professional group. We know, by the very nature of the architects, that they would not willingly lend themselves to direction by nonprofessional organizers or officers. We hesitate to make the following assertion, which is that anyone who is engaged in architectural work is generally found to be of a progressive and of an intellectual turn of mind. However, it must be admitted that initiative, talent, and natural inclination are all factors which contribute to individual advancement, and are also factors which lead to the adoption of certain careers which tend to set apart those who embark upon them. The practice of architecture is one of those careers. We feel and we assert that only those who are engaged in such a career are qualified to determine the inward policies for the welfare of that career.

And, thirdly, we urge that any organization of architectural employees must have the right of designating its own representatives in discussing matters with employers. Usurpation of this right of representative designation by people outside of the architectural field would serve to prejudice any case against collective bargaining in the eyes of the employers. We cannot conceive how anyone without the architectural ranks would have the knowledge and experience necessary to represent intelligently a professional collective-bargaining unit.

The second aspect of our direct interest in the questions before your committee relates to the unionization of the employees of the architects themselves. Here, again, you may question our concern; and it may be truthfully said that so far the unionization of the employees of the architects has made little progress, and what there has been is sporadic and isolated. We do not seek to discourage such unionization, as here again the same principle applies. If the employees of the architects wish to form themselves into units for collective bargaining, such is their privilege.

When it comes to a consideration of unionization of the employees of the architect, it is our opinion that the same precepts should apply as we have cited before in our argument with respect to those members of our profession who may now be in collective bargaining units. At the risk of repetition we again cite them.

First, no employee in a professional office should be forced, against his desire, to join a labor organization as a condition of employment.

Second, should a collective bargaining group be formed in the professional offices, it must not be forced to affiliate with a nonprofessional labor organization.

Third, the right of the employees in those units to designate their own representatives must be strictly observed.

We ask for the observance of those three principles in any appropriate legislation which is being considered by this Congress.

"Architects' Roster" and "Register of Architects Qualified for Federal Public Works"

THIS Department, as previously reported, is in the process of administering the Roster and Register program, as modified by action of The Board quoted in Bulletin No. 39. We now state that the ballots for the nomination of architects to serve on the Committees of Review have been counted and tabulated.

In order to expedite the program, a letter of notification has been sent to one of the ten (or more in case of ties) nominees in each Chapter area where the Chapter has not disapproved the program. The letter requests that the addressee in each case initiate the setting up of the Committee of Review for his area, and gives him instructions for the setting up of the Committee. The architects nominated will decide among themselves by secret (Australian) ballot which three of their number will constitute the Committee of Review.

As soon as this office is notified that a Committee of Review has been set up for any area, that Committee will receive from this office a duplicate set of the questionnaires which have been submitted by the members of the profession from the area, together with a letter of instructions. The questionnaires are placed in the *confidential* custody of the Committees of Review. Action upon them will be taken as outlined in the letter of April 15, 1946, sent to every legally practicing architect of record.

We again call your attention to the fact that no lists of qualified architects or questionnaires will be made available to Federal agencies until after the coming Convention.

Architectural Consultant Assignments in Foreign Countries

IN RESPONSE to a circular letter dated January 20th sent to the presidents and secretaries of the Chapters of The A.I.A. concerning the opportunity for consultant service for the postwar building program of Ceylon, some 65 architects sent in applications signifying their desire for the assignment. All of these applications have been transmitted to the Government of Ceylon by this office through the Department of State.

Also, in response to a circular letter issued February 24th to the presidents of all Chapters, State Associations and Organizations of The A.I.A., with respect to consultant service for buildings and a campus for the University of San Marcos in Lima, Peru, some 15 applications have been received. These, in turn, have been sent by this office to the Department of State for transmission to Peru.

The deadline for the receipt of applications for the Ceylonese Government was February 7th, and that for the Peruvian assignment was March 10th. In each instance, this office was required to act with speed, and time did not permit us to wait for the insertion of the notices in any Bulletin being sent out from this office to all the members. Under such circumstances, we have made a practice of communicating immediately with the officers of the Chapters, State Associations and Organizations, with the expectancy that the Chapters, State Associations and State Organizations are equipped to convey the information to their own memberships.

Department of Education and Research

Walter A. Taylor, Director
Theodore Irving Coe, Technical Secretary

The Architect Looks at Research

The newly established Department of Education and Research of The American Institute of Architects takes a broad view of research for the purpose of formulating long range policies and also a program of immediate objectives in research service to the membership. Research may be most broadly defined as "Organized search for useful knowledge."

Classification of Research

The traditional subdivision of science and research has been as "pure" and "applied". Careful analysis suggests a three-way divisions:

A. *Free Fundamental* research, for which the application may be at first unknown. This kind of activity in the words of Vannevar Bush "extends the endless frontiers of knowledge".

B. *Objective Fundamental* research. While dealing with basic concepts and data, this research attempts to provide insight and understanding relevant to some field of practical importance. Some of the most important problems in architecture and the building industry are of this type, involving physiology, psychology, sociology, the physical sciences, home economics, structural engineering, etc.

C. *Applied Research* is concerned with determining the qualities and performance of a vast variety of materials and equipment, singly and in combination. It bulks very large in time and personnel, and is of immediate concern to industry of all kinds. It is carried on in thousands of industrial, commercial, government and university laboratories. It is more thoroughly and systematically performed under the auspices of organizations such as the American Society for Testing Materials, the Underwriters' Laboratories, the Bureau of Standards, etc.

The broad view of research suggests another distinction. Study of building materials or building elements such as roof, floors, walls, has been extended "horizontally" to the examination of a certain detail in all building types. The architect makes use of this data piecemeal, as occasion requires. The alternative is a "vertical" scientific analysis of a building type, or group of buildings for a certain activity or function. This involves study of building requirements and of all materials and construction in conjunction, for the particular building type. This kind of analysis may begin before there is any designing in the sense of drawings.

In research we may bear in mind another distinction between architect and engineer; namely, that the architect is concerned not only with "how" to put building materials together, but also with "what" materials for "what" purpose.

The wider view of research suggests pioneer investigations in the development of uses for existing materials, and development of materials for given uses, in contrast to the routine testing of materials more or less standardized for familiar uses.

The overlapping of types of research and the need for a comprehensive approach is noted in the report of the Building Science Board of the Royal Institute of British Architects: "There are certain natural scientific divisions—chemical, physical and engineering—but they never were divisions in the sense of being divided from one another, and recognition of the fact that most building problems need to be studied comprehensively to get an answer that means anything in practice, has succeeded in obliterating any sense of division——".

"The core of their studies (Physics Division) is formed by the classic group; light, heat and sound. The field is so large that good contacts have to be maintained with such bodies as the National Physical Laboratory and with the Medical Research Council on physiological and psychological aspects."

"The essence of the light-heat-sound groups lies of course in the fact that ultimately the criteria are mostly those of the human body and, since changes in this do not lie within scope of design, the latter has to conform to the former. New development should lead to the establishment of physiology in an important position among architectural studies."

America Research-Minded

The present increased attention to research on the part of architects and The American Institute of Architects is but a part of the surging interest shown by the public and many kinds of organizations.

Research has reached a new high in general popularity. The following blurb is from an advertisement in *Fortune*: "It (research) is the driving force of creative industry. It combats depressions, stimulates prosperity. It is America's great economic stabilizer." Journalists observe that "Science is news, as never before". Because of this wide popularity it is advisable to look for the motivation of much that is heralded as research. One may find that the real purposes are to stimulate sales, for political or other kinds of propaganda, or as a "front" for other activities, or even to corral funds to create a sinecure for the promoter of the project.

In spite of the few questionable types of research projects, the wide interest in research can be explained. In general, it is characteristic of a postwar era that fundamentals are re-examined freshly and fearlessly. The practical and social consequences of science are always evident to the thoughtful, but in wartime, the very rapid progression of ideas through the successive stages of research, development, production and use makes the average citizen more aware of the importance of research. He is more willing to see private and public funds used for research, because he believes that the wartime partnership of government, science and industry should be extended into peacetime.

Existing Research Facilities

The Bureau of Standards, the American Society for Testing Materials and the Underwriters Laboratories are too well known to require more than mention. Each is somewhat limited by charter to certain areas or types of investigations, within which limits they function most effectively and publish findings which are completely impartial and reliable.

A partial indication of the vast amount of research now carried on is in the report of the National Research Council on Industrial Research Laboratories of the United States.

There are 2443 laboratories engaged in industrial research located in 47 states, the District of Columbia, Alaska and Hawaii. This figure does not include 292 colleges and universities, located in all of the states and D. C., which offer research service to industry. These laboratories are staffed by 133,515 persons, including 54,321 of professional rank (of which 20,637 are engineers) and 34,563 technical assistants.

Analysis of the report reveals that the non-academic laboratories include in their activities research in 55 fields related to the building industry, with 1668 listings in over a thousand laboratories.

Research Before Congress

Although its chances of passage are problematical, a bill now before Congress known as the "National Science Foundation Act of 1946" H.R. 942, is indicative of the wide public interest in research. It proposes, among other things:

—to provide support for scientific research and development

—to correlate the scientific research and development of the several government agencies

—to achieve a full dissemination of scientific and technical information to the public, and to foster the interchange of scientific and technical information in this country and abroad

—to create a central scientific agency within the government—"National Science Foundation", including a Division of Engineering and Technology. Advisory to the Foundation would be a National Science Board, including Divisional Science Committees.

PROPOSED NON-GOVERNMENTAL RESEARCH

The U. S. Chamber of Commerce, sharing the concern of many other agencies for an adequate and coordinated research program for the building industry, has set up the Construction Industry Advisory Council. After due deliberation and exploration of the needs, this Council has requested the National Research Council, an adjunct of the National Academy of Sciences, to set up a Building Construction Research Board, similar to the Highway Research Board, which has successfully performed a necessary and useful function. Mr. James R. Edmunds, Jr., President of The American Institute of Architects, is a member of the C.I.A.C. and, together with Octagon staff members, has participated in the formative conferences. The National Research Council has agreed to set up the desired Board and the profession will be adequately represented on the advisory, policy-making group.

Under the new terms of renewed affiliation between the A.I.A. and The Producers' Council, there will be active collaboration between The Institute and The Council along several new lines, including notably the setting up of test projects on materials used in combination. This program is now being put into effect by the Joint Committee of The Institute and Council, with the collaboration of the Department of Education and Research and the Council's newly-appointed Technical Consultant.

FINANCING RESEARCH

The familiar picture of the lone inventor or the zealous professor burning, and paying for, the midnight oil, is still valid but limited. With the tremendous scope and complexity of problems to be solved, and the wide public interest, research is now in the big money, both private and governmental. The proposed Building Construction Research Board, non-governmental, contemplates an annual budget of approximately $100,000.

The above-mentioned Bill introduced in Congress would entail vast appropriations, including salaries of from $10,000 to $15,000 for a dozen top executives.

The Building Officials Conference of America is now seeking $900,000 to endow a research institute.

The Department of Commerce is now processing applications for aid to research projects from a fund of $1,500,000.

In England the government allocates 15 million dollars per year to scientific research.

THE DEPARTMENT OF EDUCATION AND RESEARCH

The increasing complexity of building and the desire of Institute members for technical and research assistance, has led to the establishment of the Department of Education and Research as part of the new structure of The Institute, incorporating the former Department of Technical Services.

The Department has studied recent proposals for a testing service to be maintained by The Institute. The following factors are noted as making it impossible to carry out such proposals under the sponsorship of The A.I.A.

1. In the nature of building construction, the performance of materials and equipment depends to a very large extent upon design, selection, supervision and the quality of workmanship applied to field assembly of materials used in combination. Testing, approval and labeling would be at best only a partial guarantee.

2. While The Institute should provide or assist in providing to its members the best and most reliable data regarding building materials and equipment, the Institute cannot assume for its members the responsibility of selecting and controlling the use of materials. This is a local matter of personal judgment and skill and is of the essence of professional service.

3. The range of building materials and equipment is so varied that the full development of the schemes proposed would require a larger and more complete laboratory than now exists in any one place. It does not seem possible that The Institute could find unencumbered funds sufficient to enable it to surpass or even compete with heavily endowed educational and scientific organizations or government-financed institutions of similar purpose.

An alternate and feasible program has been adopted, in outline as follows:

For research and other indicated activities the function of the Department of Education and Research is to be a composite of listening post and reporting agency, clearing house and coordinating center, and instigator of needed activities. The scope is much broader than matters ordinarily termed technological and includes sociological, economic, physiological, psychological and aesthetic aspects of architecture.

In order to cover the field and to avoid duplication, the activities of the Department will have to be in large measure *research on research.* The Department will report findings according to their merit and immediate usefulness to the architects.

The Department will assist and stimulate the membership, and specially the educators, in continually reanalyzing human requirements for all kinds of occupancy and shelter.

In matters of research the Department will serve as liaison between the Profession and various technical, scientific, professional and educational agencies, including those of other countries, and will endeavor to maintain the closest possible contact with such agencies. The purpose of these contacts will be to keep the Profession fully informed, to avoid duplication in research, to aid in planning coordination and collaboration.

Sources include committees and special interest groups within the Profession and in other designing professions, scientific and technical societies educational institutions and societies outside the Profession, building officials and code authorities, building industry organizations, representatives of special owner groups or building types and research agencies in other fields, related to living standards and human welfare.

The contacts with other organizations will disclose research projects which should be undertaken jointly by groups of architects and representatives of other groups.

SCOPE OF ARCHITECTURAL RESEARCH

The wide range of subject matter of interest to the profession is indicated in the following outline:

A. Requirements
    1. Social or Functional
        a. Individual
        b. Group
        c. City
    2. Physiological
    3. Psychological
    4. Safety
B. Structural Theory
C. Building Materials
    Physical and Chemical properties.
D. Building Equipment
E. Construction
F. Professional

Matters which pertain distinctly to engineering and building technicalities can be largely covered by reporting the activities and findings of other *reliable* organizations. The areas which are distinctly basic and peculiar to architectural service are those of the human requirements for shelter.

Cross fertilization of ideas between groups within the profession and between the profession and other groups of specialists should result in findings which will enable architects to serve society most effectively in anticipating needs and trends in the designing of shelter and environment for all kinds of human activity.

The Department will advise with members and schools of architecture regarding coordination of proposed research projects and possible sources of financial assistance.

DISSEMINATION OF FINDINGS

At first the products of research will be made available to the profession through the publication of Research *Bulletins*—the extensive resources of research and technical information will be tapped, edited and reported, in a bulletin service arranged for ready clipping and filing of material of permanent value to the practitioner.

Later on, if funds permit, there will be *Handbooks*—compilation of periodically published material, and other types of material, for professional and lay use.

Teaching Material—organization of above and other types of material in the form of outlines, lecture notes, work sheets, etc., for:

Pre-convention refresher courses
Short term institutes or seminars to be given in large centers
Self-teaching individuals or groups in smaller or remote centers.

Public Education—material similar to the above, in non-technical or popular form, developed in collaboration with the Department of Public and Professional Relations for public education and lay consumption.

1947 PROGRAM

While establishing and maintaining contacts with many organizations in the interests of the long range program, the Department will pursue an active immediate program comprising the following: Continued collaboration on numerous special committees of other organizations, representing the architectural profession. Initiate desired types of research in suitable reliable institutions and laboratories, some of these through the Joint Committee of the Institute and the Producers Council, the Building Construction Research Board and technical societies, including specially problems of materials used in combination. A series of Building Type Studies, including Public School Buildings, Hospitals, Libraries, College Buildings. The first of these, on Public School Buildings appears in this issue of the Bulletin. Special Problem studies such as the Study of Causes of Loss of Life in Hotel Fires, which is now in progress.

A continuous review of approximately 150 professional and technical periodicals will disclose information and references of value to the architect which will be published in the bi-monthly BULLETIN.

SUGGESTIONS

Comments and criticism of this immediate and long range program are urged and invited from all architects and particularly from the individual members and chapters of The Institute. This is the time to help The Institute get off to a right start in a new field.

Building Type Reference Guide No. 1
The Public School Building

THE ARCHITECT AND THE PUBLIC SCHOOL BUILDING

THE strength of the American democratic ideals in education will cause school building to continue to bulk large in the total volume of building, in spite of population trends and many local variations. Public school buildings rank third in dollar volume in this country exceeded only by Public Works and Dwellings.

There will be a continuous and steady demand upon the architectural profession to solve the housing and planning problems which are becoming both more complex and more flexible. There is evidence of an increasing appreciation of the architect's role as creative designer and coordinator.

The best interests of the public will be served if the architect keeps an open mind, and is willing to work with his clients in constantly reanalyzing the problems and requirements and exploring the means of satisfying them.

This building type guide does not attempt to set up rigid technical standards and plan data, because on a national scale they do not exist. There are many regional and local variations due to climate and topography, and in the organization and techniques of education.

The purposes of this bulletin are to assist the general practitioner in self-education by:

Reporting the most authoritative opinions on theories and trends in education, in order that he may

Participate in basic school planning in his community from the earliest stages, with an informed and sympathetic attitude,

Anticipating trends which may not yet have appeared in the thinking and planning of his particular local clients, so that he may plan for

Flexibility required by present standards and for probable changes in method and organization of education during the life of the building in order that he and his clients may

Avoid early functional obsolescence, thereby making the building a better long term investment.

In order to render the most competent service in this important field the architect should take cognizance of the following general factors:

Population Trends

The effects of population trends on school building are noted in some detail in the Symposium on page 28. Another aspect is the decreasing death rate which indicates a greater average longevity. This with a decreasing birth rate portends higher average age. This with increased leisure will be the basis of demand for adult education.

Another obvious population phenomenon is the constant shifting within and in and out of urban centers. This, together with the continuous change in educational method and organization points to the avoidance of unduly heavy and permanent buildings of high initial cost. This must be balanced by the avoidance of shoddy building of high maintenance cost and rapid physical obsolescence, in all of which climate is an important variable factor.

Schools and City Planning

The elementary school has long been accepted by city planners as the determinant of the basic urban unit, the neighborhood (although they do not like the word neighborhood and are still looking for another word for the same thing).

The standard maximum walking distance to schools of three ranks is:

Elementary School	½ to ¾ mile
Junior High School	¾ to 1 mile
Senior High School	1 to 1½ miles

However the relationship of the school to city plan is no longer simply a matter of convenient walking distance for children. New ideas regarding playgrounds and parks, and the school as community center are involved. The architect will in most cases be among the leaders in city planning in his community. If there is no comprehensive planning in the city he will have to aid his clients in anticipating probable trends.

The School as Community Center

There is a very strong trend toward the use of the school building for a variety of activities for all ages. The idea is more readily accepted in rural communities where comparable facilities are not so commonly provided in other buildings. However, in large urban centers efforts are made to develop local loyalties and esprit de corps in terms of smaller portions of the city, for which purpose the public school provides a natural physical focus with democratic implications.

Outdoor Recreation for School and Community

The recommended minimum play space per pupil has increased in several decades from 10 or 20 sq. ft. to 250 sq. ft. The recommended minimum site for the school only is five acres. Consideration of these requirements leads naturally to the idea of combining school site, and public park to provide recreation facilities for all ages, with ample parking and landscaping for the school.

Federal Aid

There are now ten bills before Congress intended to help schools and raise salaries. It is expected that other bills will be introduced.

Outstanding are the Aiken Bill and the Hill-Taft-Thomas Bill, both of which favor the poorer States, and which seek to equalize educational opportunities. The Aiken Bill provides $100 minimum per year per pupil. In 1924 Maine, West Virginia and thirteen southern states were below the national average of $116 per pupil.

The Hill-Taft-Thomas Bill is sponsored by eight Senators, 4 Democrats and 4 Republicans, and also receives wide support among educators. According to the formula in this bill only thirty-three States would receive help, according to their needs.

Opponents of Federal aid fear that the Government

FINANCE

Estimated Average Annual Capital Expenditure (In 1940 Dollars) Required to Attain Desirable Goals for Public Elementary and Secondary Schools in the United States Within Specified Periods.

Purpose	Expenditures in 1939–40	Average annual expenditure required to remove deficiencies and meet current needs during a	
		10-year period (1945–1955)	20-year period (1945–1965)
1	2	3	4
A. Buildings and sites			
1. New buildings and additions to buildings	$159,200,000	$982,300,000	$566,700,000
2. Improvements to buildings	43,800,000	58,600,000	43,600,000
3. Sites	9,600,000	58,900,000	34,000,000
Total buildings and sites	212,600,000	1,099,200,000	644,300,000
B. Equipment			
1. Furniture, fixtures, laboratory equipment, etc.	31,400,000	196,500,000	113,300,000
2. Library books	5,100,000	28,400,000	21,300,000
3. Transportation equipment	8,900,000	23,100,000	20,300,000
Total equipment	45,400,000	248,000,000	154,900,000
C. Total capital outlay	258,000,000	1,347,200,000	799,200,000

will assume policy-making authority, while those favoring Federal aid point to such aid since 1802 in the form of land grants and direct financial aid, noting that States still control educational policy.

Adult Education

A representative sampling of 100 American citizens would include 4 persons with no formal schooling; 10 with 4 years or less of elementary school experience; 46 with 5 to 8 years; 30 with one or more years of high school training; 10 with one or more years of college education.

These facts are the basis of an increasing interest in and demand for a comprehensive adult education program, which will involve demands for space and equipment.

School-centered community programs are found in a variety of American communities. The South Orange-Maplewood (N. J.) Adult School is described in *Establishment of an Adult School* by J. K. Torbert. Education-recreation programs are found also in the schools of Newark, N. J., Milwaukee, Wisc., Planeview, Kans., and Decatur Ill. School buildings in Norris, Tenn., are open from 6:30 A. M. to 10:30 P. M., weekdays, twelve months a year.

The movies have proved that "supply can create demand". The adult education movement will spread rapidly and widely, but the architect and his clients should not wait for the local demand. If the idea is accepted on its merits and buildings planned accordingly, a real public service will be rendered, there will be better return on investment, and greater public satisfaction in the educational system and the building.

(See item 9 of Symposium, page 30.)

Planning School Buildings for Community Recreation Use

SOME BASIC PRINCIPLES

1. All public school buildings, located where public provision should be made for community recreation facilities, should be planned and constructed to serve effectively not only the requirements of the school program but also the needs of all the people of the neighborhood and community for a broad recreation program.

2. Authorities responsible for administering community recreation activities to be provided in the school buildings should have a share in the planning of those facilities intended for community recreation use. If there are no local public recreation authorities, other available competent recreation leadership should be consulted.

3. In meeting neighborhood recreation needs many of the facilities provided for the school program may be effectively used, such as the gymnasium, auditorium, music, shop and speech rooms, library and play room, and classrooms with removable seats.

4. Citizens' advisory groups representative of the community or neighborhood should be consulted with reference to the planning of new school buildings. Such groups can interpret to the community the need for such facilities, and to the educational authorities the community facilities desired by the people and for which they are willing to pay.

5. Facilities designed for community recreation use should be grouped at one end of the school building, in a special wing or in a separate building. Such functional arrangement limits access to other parts of the building making possible efficient control and economical maintenance and operation.

6. Recreational facilities in school buildings should be situated adjacent to the outdoor recreation areas. Direct access from parking areas and from the street should be provided.

7. Whenever a school building is designed for community recreation use, such use should be recognized as a major function of the building and not merely as incidental or unessential. A plan of operation should be worked out so that community use will in no way interfere with regular school use, but use of the school by the community should be made attractive and convenient. Facilities for community use should be available for a maximum period.

CHECK LIST

1. Provide one or more community rooms to serve as lounges or places where young people or adults can drop in outside school hours under proper sponsorship or supervision. Attractive, well-lighted and ventilated ground floor rooms prove most satisfactory.

2. Provide special cupboards for storing equipment, tools and materials used for community groups in art rooms, craft shops, and other rooms where such duplicate storage space is necessary for convenient use.

3. Provide separate lockers for community use in locker rooms serving the gymnasium, swimming pool or outdoor recreation areas.

4. Control heating and lighting for parts of the school used by community groups, to reduce heating and lighting costs.

5. Provide for closing off corridors and hallways where necessary to control community use after school hours and to prevent excessive custodial service cost for this purpose.

6. In elementary schools and in junior high schools to be used by younger children, provide a play room that opens on the playground, which is large enough for a variety of activities and contains cupboards for storing play materials.

7. Provide toilets and drinking fountains that are easily accessible from the playground and that, with the play room, can be shut off from the rest of the building.

8. Provide an entrance to the section containing community facilities that is easily reached from the street and well lighted at night.

9. There is an advantage in floodlighting play areas so that there may be a maximum of twilight and evening use.

10. Cafeterias can be used to greater advantage if there is a small stage to encourage wider utilization of a space which is normally used too little.

11. Plan all facilities with a view to multiply use. Many of the facilities designed primarily for school purposes will be usable for community purposes; very few of the facilities designed for community use will not be made usable for the school program.

American Association of School Administrators
—National Recreation Association

Symposium on Trends Affecting Schools

The Department of Education and Research has asked three prominent educational authorities to comment on ten observable trends in population and education which may affect school building construction.

The educators are, in alphabetical order:

Dr. T. C. Holy, Director, Bureau of Educational Research, Ohio State University.

Dr. Frank W. Hubbard, Director, Research Division, National Education Association.

Dr. Harry P. Smith Professor of Education, Syracuse University.

The propositions and the educators' comments, somewhat condensed:

1. *Population trends affecting school population and volume of school building requirements during the next decade.*

Because of the high birth rates during the years 1940 through 1946, elementary school enrollment may be expected to increase, reaching its peak around 1960 when children born in 1946 will be 14 years of age and should, therefore, have finished their elementary schooling. This peak is based on the assumption that the high birth rate of the war years will not continue. In the case of secondary school enrollment, it is expected there will be a further decline continuing to about 1955 when it should be arrested by the entrance into high school of children born during the high birth rate years of 1940 through 1946. (Holy) (Hubbard and Smith in almost complete agreement.)

2. *Trend in percentage of population patronizing schools and in total number of years of schooling.*

The decline in birth rates, which during the 1930s reached the lowest in the history of the Nation, has resulted in a large number of childless families. In a 1941 study made in 93 Ohio school districts, which included 18 cities only 35% of the families living in these school districts at that time had children in the public schools. If two out of every three families have no direct contact with the schools through their own children, then if the schools may expect their support, the program must be broadened to include them within its scope of influence. In the matter of the number of years of schooling, the trend for a number of years has been upward. This is shown by the difference in the percentage of the men in World Wars I and II who were high school graduates. (Holy)

Statistics of the U. S. Office of Education would seem to indicate that the percent of population patronizing the schools is steadily increasing except for the recent war period. For example, in the school year 1899-1900, 72.4 percent of the children 5-17 years of age were enrolled in the public schools. In 1929-30, the percent was 81.3; in 1939-40, it was 85.3. It declined in 1941-42 to 84.2 percent. I think more recent figures when they are issued by the U. S. Office of Education would show a return to prewar percents. While the percent of children of school age enrolled in public schools has steadily increased, the school population has become a declining proposition of the total population. Before 1900 the school population was approximately 30 percent of the total population. Today it is about 22 percent. (Hubbard)

Smith in general agreement, with added comment: One or two years beyond grade 12 may become much more general in the next two decades.

3. *Effect of migration of population of school population.*

During the war many communities, particularly the smaller ones where large war industries were located, had a tremendous influx of population. To provide housing and instruction for those, the Congress enacted the Lanham Bill which provided subsidies for capital outlay and operation. Furthermore in certain communities there is a transient population which moves in as cold weather approaches and moves out when spring arrives. Because of the much lower birth rate in the cities as compared with rural districts, there is a constant migration of population into the cities, otherwise they would not be able to maintain their present population levels. (Holy)

We have had a great displacement of population during the war period. The rim of the country, Florida, California, the Gulf areas, and the Great Lake areas have piled up populations and caused school difficulties from the angle of housing. We have also had a housing problem due to people moving from the large cities out to suburban areas on the edges of metropolitan communities. (Hubbard)

Certain centers of war industry will be affected considerably by the out-migration of families who settled in those areas because of the war industries. The school census of this particular area seems to indicate that the migration of people to this city to work in the war industries was largely that of single people or couples without children. Apparently, the families with children tended to remain where they were, even though the workers came to the industries. (Smith)

4. *Impending or probable changes in age groupings in school organization—effect of the junior college movement on the 6-3-3 school year division.*

In some states where the public junior college movement has gained widespread acceptance, such as in California, there is a trend toward a 6-4-4 type of school organization. However, as far as the Nation as a whole is concerned I do not believe the junior college movement has had a great deal of influence on either the 8-4 or 6-3-3 types of school organization. (Holy)

There is some inclination to take care of the junior college movement in a 6-4-4 arrangement. The 6-4-4 plan is pretty likely to be confined for some years in the Pacific Coast area, Texas and possibly a belt of states around the Great Lakes. (Hubbard)

New York State has established a few experimental technical institutes, but anything approaching the universal establishment of such institutes is in the future. (Smith)

5. *Trends in attendance at vocational secondary schools, both terminal and preparatory.*

The various training programs carried out by the Manpower Commission and the United States Office of Education during the war gave considerable impetus to vocational education. In Ohio a State-wide committee has been working on the problem of area vocational schools, to be so located that they serve several separate school districts. Also there has been considerable interest in technical institutions providing one to two years of training in technical fields beyond high school. In 1944 the Board of Regents of the State of New York reported a plan for the establishment of twenty institutes of Applied Arts and Sciences and one institute of Public Service Training, all of these to be state supported. In 1933, 1,340,110 persons were enrolled in Federally Aided Vocational classes. By 1945, this number had increased to 2,002,895. (Holy)

(Supporting opinion and evidence by Hubbard and Smith.)

6. *Trend in acceleration or sectioning for exceptional or slow children, relative to number and size of rooms.*

Within recent years much attention has been given to the problems arising in the case of slow learning children. Many states now provide a subsidy for their instruction. Ohio, in 1945, appropriated for a two-year period $234,000 special subsidy for slow learning children. Furthermore, the trend is toward keeping these children in the regular school centers rather than segregating them in so-called special schools. Rooms designed for these children are generally fitted with workshops and other types of similar equipment. (Holy)

No greatly increased tendency to segregate exceptionally slow children or even exceptional children. Most educators believe that wherever possible the exceptional child should be taught along with his normal fellows both for his sake and for the sake of the typical children. There will be special facilities and special training opportunities for exceptional children, but these will be attached to regular elementary and secondary school buildings rather than in specialized buildings for exceptional children. There is considerable disagreement among educators on this point. Cities like Detroit and New York have set up specialized schools. Even as small a community as Binghampton, N. Y., has a specialized school. A very fine school in Rochester, N. Y., has excellent facilities for the crippled children on one floor and a typical elementary school on the second floor. (Hubbard)

There is an increasing interest in diagnostic and remedial work for typical children. This involves space provisions for handling these problems either in small groups or on an individual basis. There is little evidence yet of any special provision for the accelerated, though in my judgment there should be. (Smith)

7. *Trends in floor area per pupil for different age groups.*

With the trend toward greater participation on the part of the pupils in the classroom program, there has been a corresponding increase in the amount of floor area per pupil. The 15 square feet which has been the common accepted standard for many years is being replaced by standards of 20 or more square feet per pupil. (Holy)

I do not see any great change in floor areas per pupil for the different age groups over commonly practiced standards of the present day, except as there will be special types of rooms or special facilities. (Hubbard)

There is a trend in thinking toward larger floor areas for elementary school work but that trend will not be realized in practice unless building costs are reduced to the point where school districts can afford to erect school buildings. (Smith)

8. *Broader concept of education involving new types of activities which affect the number and type of special activity spaces.*

In the United States as a whole, out of each 100 boys and girls who enter the 9th grade, not more than 15 to 20 will pursue their education beyond the high school. Consequently, the major job of secondary schools is training for life rather than for college entrance. Recognition of this fact is bringing about a broader conception of education which in turn means a greater variety of educational opportunity in the secondary schools. More adequate activity spaces are being provided in the fields of music, art, home economics, shop, visual education, health, physical education, drama, radio, public speaking and applied mathematics. (Holy)

I think to an increasing extent school buildings will have more special activity areas. These will be play spaces, work spaces, little theaters, etc., that will provide for artistic, creative, and cultural activities supplementing the more or less typical school program. There will also be special areas in most school buildings for community activities for adults and other age groups. For example, even in a typical elementary school, it should be possible to turn one or more workrooms into spaces where adults in the evening could work on hobby programs. The auditorium of the elementary school should be available for little theater activities among adults. (Hubbard)

9. *Adult Education. Effect, if any, on space and equipment requirements.*

In the light of the fact that the high school is the terminal training school for a large proportion of the youth of the nation, then it may be expected that greater and greater attention will be given to adult education. At the present time approximately one-third of the states of the union have special state subsidies for adult education. However, adult education has had little effect upon space and equipment requirements other than those which are now being provided for general community use. (Holy)

Representing one point of view, many educators like to have adult programs centralized in high schools and special adult evening schools requiring chiefly the use of the regular high school equipment. Many others, however, including the writer, look upon much of future adult education as a community program which will require a community school—elementary, junior high, or senior high school, whichever it may be—with facilities that can be turned to adult purposes. The adult program then will be much more informal than most of the adult education programs now being conducted at night in evening high schools. (Hubbard)

10. *Recognition of psychological factors in the character of surroundings as exemplified in the following phrases from educational literature: "The curriculum is the whole environment," "Emotional climate."*

To an increasing extent we will be concerned with school buildings from the angle of their pleasing effects. That is, we will paint buildings not from the angle of simple utility but from the angle of art and possibly the effect of colors upon emotions. Windows will be designed to suggest freedom and sunshine and relaxation, rather than to suggest factories and imprisonment. Walls and lighting will be designed to promote comfort and health and the sense of well-being. Here is a whole area where many educators are still relatively inexperienced. (Hubbard)

In a study recently made of the mental adjustment of children enrolled in three elementary schools in a large city, it was found that 12% of these children were seriously maladjusted and an additional 30% were less seriously maladjusted.

In a similar study made in a rural county, the percentage of seriously maladjusted children was found to be from 19 to 21 percent. In the light of these figures, much attention is being given to determining the causes of these maladjustments and what steps can be taken to eliminate these causes. (Holy)

Educators' Requirements

THE PROGRESSIVE EDUCATION MOVEMENT

In a statement to The Institute's Department of Education and Research, Dr. Frank Hubbard, Director of Research of the National Education Association summarized the present status of this movement by saying that Progressive Education is now spelled progressive education. In other words, many of the ideas and methods, regarded as radical and visionary when advocated two decades ago, are now more and more widely accepted, with modifications based on experience.

Some of the more salient ideas in this philosophy of education are:

The classroom is a miniature democracy. The children and the teacher mingle, work and play cooperatively. The subject matter, where possible, is integrated into activities so that the child may not be conscious that he is being taught. The ideal is to teach the child, not the subject matter. As much as possible learning is made an exciting experience, based on living, on concrete experiences. Facts come to the child from activity projects, as answers to real problems or questions.

The community is regarded as part of the school and vice versa. Pupils learn to live and work in groups, but with opportunity for self-expression. The effect of this kind of teaching on school building requirements is indicated in the following chart (next page).

EDUCATORS LOOK TO ARCHITECTS FOR CREATIVE DESIGNING

Dr. Ray L. Hamon, of the U. S. Office of Education, Chairman of Central Standards Committee of National Council on School House Construction in a recent statement to The Institute's Department of Education and Research said that in the past the professional educators and government agencies concerned with school buildings had attempted to tell the architects in detail *how* to design the school. Their present attitude according to Dr. Hamon is to tell the architect *what* is wanted, and *why* and to let the architect determine *how*. This is confirmed in the introduction of the Guide for Planning School Plants, to be published by the National Council on School House Construction this month. The title includes the word *Tentative* and it is stated that the work is published "not as standards but as principles and objectives for planning school facilities." Hope is expressed that the Guide will "induce comprehensive and creative thinking by school administrators and architects." The introduction further states that "A creative designer might find new, ingenious and economical means of complying with the objectives of good planning," The Council solicits constructive suggestions from educators, architects and others as to revisions which will make future revised editions more helpful."

SCHOOL LIBRARIES

The school library, in its important role of service and instruction agency, is an integral part of a modern school plant. Its design is of paramount importance. The following work areas require careful planning: (1) reading and circulation space; (2) work room; (3) storage space; (4) conference space; (5) audio-visual area; and (6) librarian's office.

In the average-size high school, the Reading Center should be equipped to accommodate 10-15% of the total enrollment, with special emphasis on good lighting

TODAY'S IDEAL EDUCATIONAL REQUIREMENTS AFFECTING SCHOOL BUILDING DESIGN

Educational Objective or Activity	Architectural Characteristics and Features
Courses and methods never finally fixed.	Greatest possible flexibility in general plan, consistent with durability and soundproofness; non-bearing partitions with minimum of ducts, piping, conduits.
Projects or Work Units involving variety of equipment.	Ample storage space of several types in each class room. Classroom workshop.
Group work, one or more groups.	Movable furniture. Class room approaches square plan proportion.
Use of reference books and files in classroom.	Book shelves and file cabinets.
Music and Dance, Rhythm Band.	Soundproofness. Built-in radio, phonograph, storage. Suitable floor construction and finish.
Creative Art Work, display.	Non-staining, cleanable surfaces. Exhibit space in each room.
Local Data in social projects. Local materials in science and nature study.	Bulletin boards. Aquarium, Museum, display and storage space. Landscape plan for pupil participation including gardens. Direct circulation to outdoors.
Dramatics in the classroom, as exercises in co-operation and self expression, not necessarily for audience entertainment.	Flexibility, movable furniture. Equipment for simple simulation of stage.
Visual, and Audio-visual material used on irregular schedule to supplement other activities.	Each classroom equipped with workable, convenient, durable window-sealing devices. Acoustics, Soundproofing. Adequate wiring. Air-conditioning.
School program integrated with Home, Church and Community.	Conference and counselling rooms, Meeting rooms for PTA, etc.
Health and Physical development of each pupil.	Clinic room with storage, supplies, files.
Extra-curricular activities.	Meeting rooms and special activity rooms.

(both natural and artificial) and on desirable reading facilities.

Where school libraries also function as a community facility, all areas must be expanded to include adult needs. The combination library should be located on the first floor, with outside entrance to adult reading room and some separation between community and student reading space.

SCHOOL KITCHENS

As the size of the school kitchen depends upon total meal load (unaffected by number of shifts), its design represents the collaboration of architect, cafeteria director and equipment manufacturer. Suitable provision should be made for the following features: Orderly sequence for meat and vegetable cookery; facilities for maintaining cooked and cold foods at proper temperature; efficient distribution of utensils and food preparation areas for baked foods and salads.

THE SCHOOL HOMEMAKING DEPARTMENT

The homemaking department of a school offers a difficult problem for the architect. The difficulties are inherent in the objectives of the educational program. Buildings last for many decades, but standards of furnishings and equipment change rather rapidly. Consequently, flexibility is an important attribute. It is generally accepted that the homemaking department should present a home-like appearance, and yet it must serve as classroom and laboratory for as many as thirty or more pupils at one time. Thus the rooms must be large, but not appear large; the furnishings must appear to be like those in homes, and yet they must be in scale. They must be sturdy enough to withstand harder use than would occur in the usual home, but at the same time the furniture must be such that twelve-year old girls can sit comfortably in the chairs and perform efficiently on the working surfaces. In a family home there is a place for every piece of equipment and it stays in its place.

In the homemaking department provision for a variety of learning experiences must be made, some of which occur only occasionally. This makes of primary importance the problem of convenient storage—for child care equipment; for the bed which is used when teaching home care of the sick; for the samovar and tea service used on special occasions; for service plates and "dress-up" china, silver, and equipment; and for the variety of specialized illustrative materials essential to teaching a well-rounded program of homemaking.

Architects are thinking in terms of more built-in furniture for homes, of new uses of glass, of plastics, prefabricated units, air-conditioning, sound treatment, and lighting. These should be utilized in plans for the homemaking department. We are convinced that homemaking departments which have been built with the primary consideration of teaching foods and clothing skills are now handicapping the teaching of other equally important aspects of the program. The new departments must be planned in such a way as to function effectively as a setting for the working conference. Blaziel has said that "A fundamental principle would seem to be that provision must be made for teaching all phases of homemaking whether they be taught in one, two, or three rooms." The building itself will in part determine the effectiveness of the homemaking program.

There is no doubt but that the homemaking department should have a bathroom. This should be one that can be used as a powder room when social affairs are held in the department. But it is primarily an invaluable facility for teaching housekeeping skills, personal grooming, child care, and home care of the sick. It should be equipped with a medicine cabinet for first aid materials, and there should be provision for storage of towels. In many instances this bathroom may be the only one which is accessible to some pupils, and it will in many communities set a standard for new homes.

Some ideas which architects might keep in mind are:

Build in: Window treatment should be something more than space for radiators. Provision for window boxes for plants; for extra seating by use of window seats, drop benches and drop tables for laying out cloth and patterns. This may eliminate use of folding chairs, which if used, must have a storage place. In-a-door bed for the home nursing class. Sturdy ironing boards. Dining room should have built-in cupboards for storage of dishes. These will tend to be in scale only if they *are* built in by the architect. Book-cases. Storage space for bedding, laundry and food preservation equipment.

Working spaces and surfaces. Space in the kitchen, perhaps an alcove, for a play center for young children, and proper storage space for the toys and equipment which makes possible the teaching of order as a part of child care. Space in the kitchen for home freezing and storing of frozen food. Special work surface and cupboard, perhaps sink, for making flower arrangements. Working surfaces of the correct height for different operations. Wall spaces for pictures which will be in scale with the room.

Storage cabinets. This, after all, is a recurrent problem. The variety of teaching and illustrative materials necessary for teaching make this the perrenial problem of the teacher. Lock cabinets should be provided for collections assembled as permanent collections—antique textiles, laces, dishes, etc. Wall paper sample books, rug sample books, textile samples, and materials of this bulky sort require special storage.

DR. EVELYN M. HERRINGTON

RADIO IN THE SCHOOLS

Basically, there are three major considerations in the use of radio in the classrooms in high schools and elementary schools. A major distinction is between the station and the workshop. The station emphasizes public station programming for the whole community, the workshop emphasizes training for student use.

The school system must first determine whether it wants to operate its own FM station. It can be installed in existing buildings or even better in new structures designed solely for FM education stations. This type of planning involves several studios, an observation room, a demonstration classroom, a control room, offices, and sometimes a small auditorium.

The second major consideration is to build a workshop within the school. The difference between a workshop and a station is that the former is a broadcast center with studios, control rooms, observation room and offices but supplies its programs through existing station, i.e. transmitters owned and operated by someone other than the school system.

If a high school or elementary school is to put in a workshop they would need a studio and adjoining control and observation rooms as a minimum. Offices and extra studios can be added. The purpose of these studios would be to give students experience in using sound as a medium of communication. Programs can be transmitted from these studios throughout the school, or to commercial or educational radio stations, or recorded and subsequently used as a transcription program.

The third consideration is the acoustic treatment of classrooms and adequate wiring so that schools may use programs off the air as a part of regular classroom work. The only problem here is "right" location of speaker and the possibility of darkening the room while a program is received.

Two precautions are suggested: (1) An FM station designed to serve the community is at present a very expensive proposition. Published estimates of $15,000 are not realistic. It is expected that manufacturers will be able to materially lessen the cost in the near future, especially with transmitters serving limited areas rather than the entire community.

(2) Central sound systems should not be installed in the principal's office if the school wants to get maximum value. Central sound installed in a control room, serving a small studio, and with outlets to all rooms, will mean more to the school, for students can then use it. Put it in the principal's office and it will come to be his plaything.

PROFESSOR KENNETH G. BARTLETT

General Planning Data for Public School Buildings

TEACHING SPACE VS. OTHER ACTIVITY AREAS

The most fundamental test of a good school building is the amount of teaching space provided.

Recommended Allocation of Elementary School Space

Teaching Incl. laboratories, workshops, gymnasium, auditorium, library.	65% or more
Administration Incl. offices, counseling, health, faculty rooms.	5% or less
Services Incl. kitchen, lunchroom, lockers, janitor, toilets.	8% or less
Accessories Heating, general storage.	5% or less
Circulation	17% or less
	100

CORRIDOR WIDTHS

Where no local or State regulation governs, desirable widths of corridors may be determined by the formula;

$$W = 4 + \frac{P}{25}$$

in which;

W = net clear width in ft. (between locker doors standing open)

P = number of pupils in wing or unit served by corridor.

EXIT WIDTHS

Where no local or State regulation governs, desirable widths of exits may be determined by the formula;

$$E = .4\,P$$

in which;

E=net width of exit in inches.

P=number of pupils in room or building to be emptied.

(Formula is based on a rate of 30 pupils per minute per width of 22 inches, with intent to empty building in two minutes, which actually works out E=.367 P)

NUMBER OF STORIES

With improved insulation materials and techniques and more efficient heating equipment, more consideration is given, even in colder latitudes, to the one-story building. Escape from the one-story structure is so much easier that the hazard of death or panic in case of fire is greatly reduced, justifying the difference in code requirements in many communities between one- and two-storied. In such cases the added cost of fire-resistant construction and stairs for the higher building may offset the added cost of land and heating for the spread-out one-story.

CHART OF RECOMMENDED CIRCULATION AND EXPOSURE

Activity Spaces	Direct Public Entrance	Conspicuous Public Location	Near Parking Lot	Direct Access to Playground	Preference in Exposure	Corridor Connection other Elements	Direct Out door Exit	Isolated Unit	Serv. Entr.	Uncontrollable Noise Levels		
										Quiet Zone	Moderate Zone	Loud Zone
Administration.......	★	★	★			★					★	
Class Rooms.........					★	★	★			★		
Kindergarten.........					★		★	★		★	★	
Special Rooms........					★	★			★	★		
Assembly............	★	★	★			★	★		★		★	
Recreation...........	★	★	★	★		★	★					★
Dining..............		★		★		★	★		★			★

CHILD STATURE DIMENSIONS

FOR DESIGNING OF FURNITURE AND EQUIPMENT

Age	Avg. Ht. H	Shelf Reach 1.2 H	Eye Level .9 H	Shoulder Ht. .8 H	Fingertips		Shoulder Width H/4	Seat Ht. (rear) 2/7 H	Desk Ht. 3/7 H+1″
					Standing at Table H/3	Outstretched H			
5..............	3′— 7	4′— 3½	3′— 2¾	2′—10½	1′— 2¼	3′— 7	—10¾	1′— 0¼	1′— 7½
6..............	3′— 9	4′— 6	3′— 4½	3′— 0	1′— 3	3′— 9	—11¼	1′— 1	1′— 8¼
7..............	3′—11	4′— 8¼	3′— 6½	3′— 1½	1′— 3¾	3′—11	—11¾	1′— 1½	1′— 9
8..............	4′— 1	4′—10¾	3′— 8	3′— 3	1′— 4¼	4′— 1	1′— 0¼	1′— 2	1′—10
9..............	4′— 3	5′— 1	3′— 9¾	3′— 4½	1′— 5	4′— 3	1′— 0¾	1′— 2½	1′—11
10..............	4′— 5	5′— 3½	3′—11½	3′— 6½	1′— 5¾	4′— 5	1′— 1¼	1′— 3	1′—11¾
11..............	4′— 7	5′— 6	4′— 1½	3′— 8	1′— 6¼	4′— 7	1′— 1¾	1′— 3¾	2′— 0½
12..............	4′— 9	5′— 8½	4′— 3¼	3′— 9½	1′— 7	4′— 9	1′— 2¼	1′— 4¼	2′— 1½
13..............	4′—11	5′—11	4′— 5	3′—11	1′— 7½	4′—11	1′— 2¾	1′— 5	2′— 2¼
14..............	5′— 1	6′— 1	4′— 7	4′— 0½	1′— 8¼	5′— 1	1′— 3¼	1′— 5½	2′— 3

Class Room Area Units

for various types of activity and furniture

Furniture Arrangement	Sq. Ft. per Pupil
Chairs and Desks	
Formal Aisle Plan	10
Closed Circular	16
Open Circular	25
Desks Grouped in Fours as Tables	10
Chairs only	
In Rows	5
Large Circle	8
Small Circles	8
Sleeping Mats	
(Kindergarten and Lower Elementary	18

Class Room Capacities

Recommended	20 pupils
Maximum	35 “

The Client Says:—

ARE NOT THE SUFFERINGS of past ages, are not cries of expiring nations . . . a summons sufficiently loud to reach our ears and to rouse us to apply a remedy for the present, an antidote for the future? We shall answer these questions by the way in which we educate the rising generation. If we do not prepare children to become good citizens—if we do not develop their capacities, if we do not enrich their minds with knowledge, imbue their hearts with the love of truth and duty, and a reverence for all things sacred and holy, then our republic must go down to destruction as others have gone before it; and mankind must sweep through another vast cycle of sin and suffering, before the dawn of a better era can arise upon the world. It is for our government, and for that public opinion which in a republic governs the government, to choose between these alternatives of weal or woe.—*Horace Mann, in his Eighth Annual Report to the Massachusetts Board of Education, 1844.*

Schools in Small Communities

“AMONG YOUNG COUPLES, particularly, there is a widespread conviction which accounts in no small measure for the wave of migration from cities to surrounding small towns. It is their conviction that children have much to gain from such a move. It is not simply a question of more fresh air and sunshine, but of improved educational opportunity. They know that the small town, as contrasted with both the city and the rural area, is generally in a most favorable position to capitalize on the educational advantages of both, while remaining free of their weaknesses.”

Community use. “Let us capitalize on the school building's potential usefulness to the community as a whole. It is not the property of the board of education or of the children alone. Rather, it belongs to the community which builds it.”

Usefulness is more important than impressiveness. “A school building is not an appropriate vehicle for proclaiming the affluence of a community. Ostentation and monumentality are not compatible with the needs or the interests of children. Money spent on vanity is not just money wasted. It usually represents educational facilities of which the pupils have been deprived.”

Mr. John Nichols, formerly supervisor of school buildings and plans, State Department of Education, Hartford, Connecticut, and now with Ernest Sibley, architect, West Hartford, Connecticut.

The Value of the Architect's Services

“Too much stress cannot be placed on the importance of the architect in the school plant program. It is he who must coordinate the services of all the special engineers and produce a total design incorporating the educational requirements in a pleasing structure conforming to state and local codes. All this he must do under the direction of the educational authorities and within the limits of a fixed budget. The successful performance of these functions calls for the highest degree of managerial ability, artistic talent, technical skill, and professional integrity. Without these qualities in the architect, the educational plant will be a disappointment.

“It is difficult to determine the monetary value of good architectural services. Good architects are worth more than they are usually paid, and poor ones would be expensive if they worked for nothing. In justice to both architects and the public, agreements with architects should be in writing and indicate very clearly the amounts and conditions of payments and the architect's specific relationships to such services as the preparation of preliminary sketches, working drawings, specifications, and detailed drawings; and the checking of shop drawings, approval of materials, field supervision, and structural, electrical, mechanical, and landscape engineering services."

Dr. Ray L. Hamon
U. S. Office of Education
In American School and University,
1946 Ed.

Let's Profit by Past Mistakes

The Connecticut State Department of Education recently published the following warning and advice:

It will be wise to remember the lessons learned during the late thirties. Many mistakes were made then in haste that are now being regretted in leisure. They were made because Federal authorities, in making grants, insisted upon immediate action for which educational authorities were not prepared.

Some of the more common errors were:

1. Use of designs which were already obsolete.
2. Use of sites that were too small. These became more and more inadequate as enrollments grew and community recreation needs became increasingly felt. Rising property values, however, made further site enlargements prohibitive.
3. Use of sites which were not located to serve the specified attendance area conveniently or offer safe access routes.
4. Placing schools in areas which were declining in school population due to business encroachments or aging of houses and residents.
5. Failure to anticipate population shifts to those areas ripe for home development.
6. Failure to design buildings so that they were adapted to the community's civic and recreational needs.
7. The use of designs and methods of construction that were not adapted to enlargement or to changes that would help to keep the buildings young.
8. Adding to existing obsolete buildings that limited unfavorably the nature of the added portions themselves.
9. Failure to anticipate eventual reorganization of the schools on a different allocation or grouping of grades among buildings.

If such errors are to be avoided in the future, it is imperative that all factors be weighed deliberately in the light of the changes that will come in the 50 years or so that a new structure will be used. Such an analysis consumes time. That time is available now—it probably will not be later.

The evidence that must be gathered and weighed, briefly stated, is as follows:

1. Present distribution of pupils' homes—specifically.
2. Probable areas which will see home development when building resumes. The probable density of population to be expected.
3. Probable areas which will experience a declining school population.
4. Enrollments by grades and by schools as numerical evidence of trends in population.
5. Capacities and locations of buildings.
6. Condition of existing buildings, their adaptation to present and future educational and community needs, their adaptation in design, construction, and site to additions and alterations.
7. Determination of locations where new school facilities are and will be needed.
8. Survey of possible sites from standpoint of location, size, access, physical characteristics, probable cost, et cetera.
9. Evidence of future probabilities of school reorganization.

Only when these data have been assembled and analyzed is a board of education in a position to take action on new school facilities. They will form the basis for the broader decisions on what course to pursue. The board is still not in a position, however, to obtain the services of an architect in developing sketches.

Sketches should be started only after a detailed statement of needs for the specific project has been formulated. Such a statement will include an itemized description of the facilities to be provided.

(Editorial Comment: Some exception may be taken to the last two paragraphs. The architect, as a part of his service and for his own protection must make every effort to ascertain that the client has carefully prepared a dependable program. As a citizen the architect may very well participate in surveys and studies preparatory to a school building program. As a professional man he should be retained early in the study period because of his knowledge of city planning, and his ability to judge of the adequacy of sites.)

How to Cooperate with the State Education Department

About half of the States now maintain school plant divisions in their State departments of education, offering consultative services to school administrators and architects. Most of these divisions have or will develop, standard procedures for approval of preliminary drawings. In some States the local board is not permitted to pay for preliminary drawings, or to authorize working drawings, until the State division has approved the premilinary drawings.

The following check-list for preliminary drawings is taken from the requirements of the Division of Schoolhouse Planning of the California State Department of Education:

Preliminary drawings when submitted to the Division shall include a plot of building plan; floor plan, elevation of two sides of building; showing the following items:

PLOT PLAN (to scale)

Size and shape of entire site with over-all dimensions.

Point of compass and data on prevailing and storm winds where significant.

Topographical conditions (engineer's survey is required except on level site).

Location of proposed building on site, its future additions and existing structures.

Student traffic connection between all buildings.

Service roads and parking areas.

Buildings on adjacent properties within 40 feet of property lines.

Existing growth (trees) and natural barriers (rocks, cliffs, streams, etc.).

Adjacent streets, highways, sidewalks, railroads, etc.

FLOOR PLANS (to scale)

Location, sizes and purposes of all rooms.

Location of all doors, windows, etc.

Location of plumbing fixtures, chalk boards, bulletin boards, built-in equipment and casework.

General method of heating, ventilating and lighting.

Over-all dimensions.

Possible future additions to the building.

Tentative furniture and equipment layouts including student stations.

ELEVATIONS (same scale as plans, of at least two sides.)

Finished floor and ceiling levels.

Finished outside grades.

Windows, doors, steps, areas, retaining walls, etc.

Materials, especially as related to acoustics and maintenance.

SECTIONS (same scale, to explain conditions not made clear in other drawings.)

MISCELLANEOUS

Dates of drawnigs and revisions.

For auditorium-assembly units seating over 200, evidence that acoustical adequacy has been considered in shape and form.

Brief statement from school board explaining need for the building and the proposed method of financing.

School Building Specialists in Federal and State Offices of Education

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GEORGIA
S. P. Clemens
Atlanta 3

IDAHO
G. C. Sullivan
State Capitol Bldg., Boise

INDIANA
Harvey Poling
State House, Indianapolis

IOWA
Cameron M. Ross
State House
Des Moines 19

KENTUCKY
G. Young and
Paul W. Thurman
Frankfort

LOUISIANA
C. E. Laborde
State Capitol
Baton Rouge 4

MAINE
William O. Bailey
State House, Augusta

Michigan
Wilfred F. Clapp
Capitol Building
Lansing 2

Minnesota
I. O. Friswold
State Office Building
St. Paul 1

Mississippi
W. G. Eckles
Old Capitol Building
Jackson

Montana
Elizabeth Ireland
c/o Capitol, Helena

Nebraska
F. B. Decker
State House, Lincoln 9

Nevada
Deputy Superintendent
Carson City

New Hampshire
Paul E. Farnum
Concord

New Jersey
Seymour Williams
Trenton 8

New York
Don L. Essex
Albany 1

North Carolina
W. F. Credle
Raleigh

North Dakota
Paul A. Dalager
State Capitol, Bismarck

Oregon
D. A. Emerson
State Library Building
Salem

Pennsylvania
Hubert C. Eicher
Harrisburg

Tennessee
H. C. Headden
War Memorial Building
Nashville 3

Texas
A. B. Martin
Austin 11

Vermont
Carl J. Batchelder
Montpelier

Virginia
Arthur E. Chapman
State Office Building
Richmond 16

Washington
Elmer L. Breckner and
Frank L. Sincock
Old Capitol Building
Olympia

West Virginia
John Marshall
State Capitol
Charleston 5

Wisconsin
H. W. Schmidt
Capitol, Madison 2

Wyoming
Raymond S. Orr
Capitol Bldg., Cheyenne

Bibliography on Education and Public School Buildings

Some publications which have included valuable illustrated school plant articles on buildings, grounds, and equipment; especially during the past five or six years:

Educational—Monthlies

(See **School Life** probably April 1947 for list of references.)

The School Executive, The American School Publishing Corporation, 470 Fourth Avenue, New York 16, New York.

The Nation's Schools, The Nation's Schools Publishing Company, Inc., 101 Park Avenue, New York 17, New York.

The American School Board Journal, The Bruce Publishing Company, Milwaukee, Wisconsin.

Architectural—Monthlies

(See **School Life** for July 1946 for list of references.)

The Architectural Forum, Time, Inc., 350 Fifth Ave., New York 1, N. Y.

Architectural Record (Special school editions available), F. W. Dodge Corporation, 119 West 40th Street, New York 18, New York.

Pencil Points, now Progressive Architecture, (Special school editions). Reinhold Publishing Corporation, 330 West 42nd Street, New York 18, New York.

Some good school plant bibliographies:

Review of Educational Research, "School Plant and Equipment," American Educational Research Association, 1201 Sixteenth Street, N. W., Washington 6, D. C.—December 1932, October 1935, October 1938, April 1942, and February 1945, (1948 number now in preparation under chairmanship of Dr. E. T. Peterson of the University of Iowa.)

Bulletin(s) of the School of Education, Indiana University, "Bibliography of School Buildings, Grounds, and Equipment," Bloomington, Indiana—January 1928, March 1933, June 1933, March 1935, March 1945, and September 1945.

A Guide for Planning Facilities for Athletics, Recreation, Health and Physical Education, prepared by a National Conference on this subject and will be published soon. For information on the availability of this publication, write to Mr. Theodore P. Bank, President, The Athletic Institute, 209 South State Street, Chicago 4, Illinois.

EDUCATION—General

General Education in a Free Society. Report of the Harvard Committee. Cambridge, Harvard Univ. Press. 1945. $2.00.

Democratic Education. Fine, Benjamin. New York, Crowell, 1945. $2.50.

Twentieth Century Education. Valentine, P. F., ed.

Education for Freedom. Hutchins, Robert M., Baton Rouge, Louisiana State Univ. Press. $1.50.

Integrating High School and College—The Six-Four-Four Plan at Work—Leonard V. Koos, Harper, '46. $3.00.

This book is the outgrowth of an extensive investigation into the operation of the so-called 6-4-4 plan of school organization over a twenty-year period. It covers in a comprehensive and national way the same kind of appraisal which the volume, *The New American College* covers in respect to one college in Pasadena, California. It compiles the opinions and attitudes of administrators, instructors and students who have worked under this plan and thus supplies a total evaluation of a movement which gives every promise of receiving wider acceptance in public school systems.

The Public Schools and Spiritual Values—John S. Brubacher, *Ed. and Others.* Harper, '46. $2.50.

The word "spiritual" in the title of the 7th Yearbook of the John Dewey Society may well surprise many of the followers of this annual publication. Dewey's name has been associated with "progressive education" but few have understood the emphasis which it has included on spiritual values. This book not only demonstrates the true character and breadth of aim of progressive education, but also comprises a timely, vigorous and constructive statement of why and how the public schools can encourage and teach young people those character traits which this Yearbook calls "spiritual."

Education for All American Youth. National Education Association of the United States. Educational Policies Commission, National Education Association of the United States and the American Association of School Administrators, 1944. 421 p.

Proposes a planned and vigorously implemented program for the improvement, adaptation, and extension of educational services to youth in secondary schools. Describes two hypothetical communities in post-war America, Farmville and American City, and suggests possible solutions to the problems of meeting the educational needs of youth in rural and urban communities. A summary and pictorial presentation has been issued by the National Association of Secondary School Principals under the title **Planning for American Youth.** 64 p.

Extent of Schooling of the American People. Comm. on Tax Educ. and School Finance, N. E. A. Wash. D. C. Nat'l. Educ. Assoc. pp. 1-16. Nov. '44. 15c.

Extent of Schooling of the Rural-Farm Population and the Urban Population. Comm. on Tax Educ. and School Finance, N. E. A. Wash., D. C. Nat'l. Educ. Assoc., pp. 1-16. Nov. '44. 15c.

High Schools for Tomorrow. Dan Stiles. Harper. '46. $2.50.

How high schools can supply the kind of educational experience which fits young people to meet all phases of today's life is the subject of this lively and popularly written volume by a former high school teacher who has in the last dozen years visited nearly a thousand high schools in thirty states.

SCHOOL AND COMMUNITY

GENERAL PROGRAM AND FINANCE

The National Elementary Principal. Wash. D. C. Nat'l. Educ. Assoc. v. 25. No. 5. pp. 1-51. Apr. '46. 35c.

The most valuable short summary available, representing educators' ideals and objectives in school building.

Educational Planning. *School Executive,* Vol. 63, Nos. 5-12, January-August 1944.

A special section in each issue indicated is devoted to post-war educational problems, as follows: General; State and local programs; the school lunch; social studies; school boards; elementary schools; secondary schools; returned war veterans.

The Principal in the Modern Elementary School. Robert Hill Lane. Boston: Houghton Mifflin, 1944. Chapters 3 and 4, pages 51-116. Eighty-one illustrations.

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NATIONAL BUREAU OF STANDARDS

Simplified Practice Recommendations

The National Bureau of Standards announces the availability of the following; copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at the prices indicated (stamps not accepted).

Simplified Practice Recommendation R21-46, Lavatory and Sink Traps—5 cents.

This is a revision of the original recommendation, which became effective in 1925, and contains 6 tables of various types of traps showing sizes and styles recommended for stock production, with new material not in the earlier edition.

Simplified Practice Recommendation—R174-47, Cast Iron Radiators—5 cents.

This revised recommendation retains all but one of the 10 sizes of small-tube radiators previously recommended and adds a stock assembly schedule of these radiators. The list is based on a study showing that 60 standard assemblies would take care of 90 per cent, or more, of the demand over the country.

Simplified Practice Recommendation R219-46, Automatic Regulating Valves—5 cents.

Based in part on experience gained through war-time production and use of these valves—5 cents.

Simplified Practice Recommendation R222-46, Hot-Rolled Carbon Steel Bars (Produced from Billets or Blooms)—10 cents.

This recommendation is intended to include those nominal sizes of hot-rolled carbon steel bars and bar-size shapes currently in general use and demand, and affording an adequate selection for ordinary uses and for stocks.

Research on Building Materials and Structures

To the list of 105 BMS Reports previously reported the following have been added and may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., at the prices quoted: (Stamps not accepted.)

Report BMS 106—Laboratory Observations of Condensation in Wall Specimens—10 cents.

This investigation indicates that condensation occurred within a heavily insulated wall, but that conditions conducive to condensation within the wall structure could be avoided by the use of an effective vapor barrier or by ventilating the interior of the wall with cold air.

Report BMS 107—Building Code Requirements for New Dwelling Construction—20 cents.

The requirements supersede earlier Report BMS 88, which has been revised in the light of suggestions from governmental housing agencies, the Forest Products Laboratory, and many industrial organizations. The requirements are presented for consideration by local authorities in revising or formulating building codes.

Miscellaneous

Code for Protection Against Lightning. Natl. Bur. Stds. Handbook H. 40 1947 (superseding H. 21) Supt. of Documents. 20 cents.

Perhaps the "finger pointing toward heaven," symbolized by the church spire, served as a magnet to complete the electric circuit which last year, between July 2 and 22, destroyed five churches struck by lightning.

Such "fingers," in the absence of effective protection, may point the way to an electrical discharge with resulting destruction of the building.

AMERICAN STANDARDS ASSOCIATION

A new list of Standards, now totaling 864, approved as "American Standard" by the American Standards Association, has been published.

These Standards apply to every important engineering field in which the architect has an interest and include Standards dealing with public and industrial safety, industrial medicine and a wide variety of consumer goods.

The A. I. A. through representation, has cooperated in the formulation of many of the Standards related to construction.

A copy of the list of Standards and their prices may be obtained without cost from the A. S. A., 70 East 45th Street, New York 17, N. Y.

Standards Recently Approved

American Standard Building Regulations for Reinforced Concrete, American Concrete Institute, 318-41, ASA A89.1 1-1946—50 cents.

American Standard Building Requirements for Light and Ventilation, ASA A53.1-1946—45 cents.

E. Philip Schreier, and Samuel R. Bishop, alternate, represented the Institute on the ASA Sectional Committee which formulated this Standard.

The following Standards have been approved as American Standards by the ASA and are now in process of publication:

U OF I
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Technical and Research News

MODULAR COORDINATION GAINS MOMENTUM

Modular Coordination has ceased to be the theory of a desirable objective, it has passed the creeping stage and is now on its feet and making good forward progress.

In the comparatively brief period of nine years, more than half of which were subject to the distraction and uncertainties of a world war emergency, ASA Project A62,—for the coordination of the dimensions of building materials and equipment,—developed from the academic discussion of "a consummation devoutly to be wished" to the sound and practical basis of an "American Standard."

This provided the first authoritative starting point for the coordination of the dimensions of building materials generally and there has already resulted a gratifying degree of acceptance and application of the principles of Modular Coordination on the part of architects and the producers of the materials of construction.

Architects Responsibility in Leadership

From the inception of ASA Project A62, and the acceptance of Joint Sponsorship by The Institute, the logical leadership of the architect in adopting and applying the principles of Modular Coordination has been recognized by other interested groups within the industry.

The responsibility of members of the Profession for the advancement of Modular Coordination was well expressed in a communication addressed "To Members of the Architectural Profession" by Past President of The Institute Raymond J. Ashton, from which the following is quoted:

> "The Board of Directors of The Institute has endorsed this Project and urges you to undertake at once the application of the principles of modular planning to building design. Other groups of the construction industry, cooperating with the development of Project A62, look to the architect to accept this responsibility of leadership which is in the interests of the profession, the construction industry as a whole, and the building public."

Architects who prepare the drawings, producers who manufacture the materials of construction, and contractors who assemble and fabricate these materials at the site must make their appropriate contributions if the reducing of construction costs, through the medium of Modular Coordination, is to achieve the full measure of its potential benefits to the building public.

New Handbook

In connection with the adoption and application of these principles the recent publication, by Modular Service Association, of "A62 GUIDE FOR MODULAR COORDINATION", provides the architect, and others interested, with an authoritative handbook describing in detail the application of the principles of Modular Coordination and the use of modular products.

Accelerating Acceptance

The recognition of the need for reducing the cost of construction, without sacrificing qualities of safety, utility, and durability, is giving emphasis to the application of the principles of Modular Coordination in the planning of structures and to building materials generally.

The U. S. Army Corps of Engineers in charge of the planning and construction of the Veterans' Administration Hospitals, have been quick to recognize the advantages of applying the principles of Modular Coordination in the planning of these hospitals.

This was recently made the subject matter of a circular letter describing and recommending Modular Coordination to the Division and District Engineers of the Corps of Engineers. Attention was called to the fact that modular masonry products and steel and wood sash permit the present design of the shell of these buildings to be based on modular dimensions in various sections of the country generally and that there is no indication that a lack of other modular products would increase the cost of buildings designed on a modular basis.

While the executives of the Corps of Engineers, for understandable reasons of policy, do not *require* the application of the principles of Modular Coordination in the planning of hospitals under this extensive program, the application of these principles by architects planning veterans hospitals is welcomed.

American Standard Specifications for Portland Cement Stucco, ASA A42.2-1946. A.I.A. Co-sponsor.

American Standard Specifications for Portland Cement Plastering, ASA A42.3-1946. A.I.A. Co-sponsor.

American Standard Specifications for Gypsum Plastering, Including Requirements for Lathing and Furring. ASA A42.1-1946. (A revision of ASA A42.1-1938.) A.I.A. Co-sponsor.

MISCELLANEOUS

A62 Guide for Modular Coordination. Comm. A62 of American Standards Assoc. 1946. Modular Service Association. $10.00.

Even the most cursory examination of the 290 pages and 314 illustrations of this 9″x12″ volume will reveal the importance of its contribution to a clear understanding of the principles of modular coordination and their practical application in the preparation of architectural drawings, and the use of dimensionally coordinated building materials.

In simplifying the application of these principles the relationship of diagrammatic illustration to printed descriptive text will be appreciated by the architect as an exemplification of the old Chinese proverb "A picture is worth more than 10,000 words."

The publication of the GUIDE comes at a most opportune time and will be welcomed by the many architects who recognize the advantages of modular coordination and those who have felt the desirability of an authoritative medium of assistance in applying its principles.

Its general arrangement and the comprehensive and detailed treatment will be found to adequately serve its purpose.

Aside from its usefulness as a practical working handbook, the A62 GUIDE sets an unusually high standard as an example of the bookmakers' art, worthy of a place in every architect's library.

"Facts You Should Know About Prefabricated Houses." The Better Business Bureau.

The subject matter is directed particularly to the prospective small home owner and includes a "check list" of questions referring to many matters which should be considered in the purchase of a home and particularly one of prefabricated construction.

Automobile Parking. Central Business District Council of Urban Land Institute. Tech. Bul. No. 6, 1947. The Institute, 1737 K St., N. W., Washington, D. C. $2.00.

Suggested solutions to the vital problem of automobile parking in central business districts.

The current parking programs in five cities are included, also diagrammatic layouts of studies in Baltimore and Los Angeles, and schedules of capital and operating costs, with summaries of two recent zoning ordinances requiring off-street parking in business districts.

Time Saver Standards. Architectural Record, 656 p. Book Dept., Record. $12.00.

The entire series of TIME-SAVER STANDARDS which have appeared over a ten-year period in the "American Architect" and "Architectural Record."

This is the first publication in a single volume of this useful and informative collection of accepted architectural and engineering standards which include detailed studies, specifications, and other concise planning data on 277 different phases of building design, construction, materials and equipment, with more than 1000 illustrations, charts and diagrams and a master index.

Home Wiring Handbook. Better Homes Dept., Westinghouse Electr. Corp., Pittsburgh 30, Pa. $1.00.

A well illustrated manual based on present nationally accepted standards, devoted particularly to the electric wiring requirements for residential construction ranging in price up to $12,000, based on 1940 building dollar value.

Recommended requirements are divided into four price groups from approximately $4,000 to $12,000.

Details of wiring installations, methods of determining number and size of control centers, sizing feeders and service entrance conductors, and a suggested specification for single-family dwellings are included.

Installation Guide No. 4—Two Pipe Reverse Return Gravity Hot Water Heating System. 1946. Institute of Boiler and Radiator Manufacturers, 60 East 42nd Street, New York 17, N. Y. 25 cents.

Addition to a series of booklets based on the results of a research program carried out in collaboration with the University of Illinois.

Like its predecessors, which were referred to in Bulletin No. 3, of The Department of Technical Services, the booklet is well illustrated with installation diagrams and includes calculation and design data, and other information of technical and practical value.

Specification for the Design of Light Gage Steel Structural Members. The American Iron and Steel Institute, 350 Fifth Avenue, New York 1, N. Y.

Official industry standards for light gage steel which makes possible a wider use of this material for certain types of building construction.

The specification is the result of studies and research work carried on at Cornell University for more than seven years.

The endeavor has been made to simplify design procedure by the inclusion of design tables, curves and charts, with illustrative examples.

Termite Control Bulletin

The Terminix Division, A. L. Bruce Company, Memphis, Tennessee, contains a recommended Technical Specification for the chemical insulation of existing structures against subterranean termites. Includes information of value in preventing termite attack in connection with new construction, alterations and additions.

OTHER TECHNICAL NEWS

"MODULAR GRID LINES"

As a successor to *Moduletter,* so ably edited by Frederick Heath, Jr., one of the "Pioneers" in the field of Modular Coordination, The Modular Service Association, which was organized to furnish technical and secretarial assistance to ASA Committee A62, will soon begin the publication of a regular Bulletin, to be called "Modular GRID LINES," which will feature material of informative and technical interest related to Modular Coordination, the application of its principles to particular architectural projects, and the materials of construction, as well as other matters of interest in connection with the rapidly developing adoption of Modular Coordination.

Architects who address a request to MSA, 110 Arlington Street, Boston 16, Massachusetts, will be placed on the mailing list for the new bulletin.

NEW EDITION OF A.I.A STANDARD FILING SYSTEM

Since its inception, in 1920, The A.I.A. Standard Filing System, has been revised and amplified, from time to time, to keep its classifications, and their designating file numbers, in harmony with technological advances and developments in the field of materials, appliances, and equipment employed in various phases of construction.

In accord with this policy a new 1947 edition of THE A.I.A. STANDARD FILING SYSTEM AND ALPHABETICAL INDEX (Document 172) is now available.

There is a continuing increase in the use of this standard filing medium by architects, engineers, landscape architects, contractors, institutions, and others, and an increasing number of the producers of these products are premarking their descriptive literature with the appropriate A.I.A. File Number.

While the effort is made, in the re-editing of earlier editions, to minimize changes in classifications and file numbers, as previously listed, users of The A.I.A. Standard Filing System for filing purposes, or the premarking of literature, should refer to the latest edition to note changes from earlier editions and the addition of new classifications and their designating file numbers.

Increased publication costs make necessary an increase in the cost of the 1947 edition to $2 a copy, postage paid.

STUDIES IN INDUSTRIAL VENTILATION

As a result of the interest in industrial ventilation of the American Society of Heating and Ventilating Engineers and the U. S. Public Health Service a long range research program has been inaugurated.

A survey indicated the absence of dependable and factual data on the design of industrial ventilation systems and the pressing need for the same.

THERMAL CONDUCTIVITY OF INSULATING MATERIALS

A program to determine more accurate and dependable values of the thermal conductivity of most of the insulating materials on the market has been initiated by the Committee on Research of the American Society of Heating and Ventilating Engineers.

This will include the checking and accrediting of the laboratories which will conduct the tests in accordance with A.S.T.M. Standards.

Tables of conductivity values for insulating materials indicate they have been determined by various laboratories, at different mean temperatures, and probably with various types of equipment.

This program should provide uniformity in the results obtained and furnish a more accurate determination of the relative insulating value of various materials.

NEW CHAPTER REPRESENTATIVES FOR COLLABORATION WITH DEPARTMENT OF EDUCATION AND RESEARCH

Since the publication of the list of these Chapter Representatives in *Bulletin* No. 1, and the changes noted in *Bulletins* Nos. 2 and 3 of the Department of Technical Services, the following changes have occurred.

Professor W. L. Bradshaw, of the Department of Architecture and Allied Arts, Texas Technical College, Lubbock, Texas, has been appointed in the Texas Panhandle Chapter.

C. O. Chromaster has been appointed in the Fort Worth Chapter.

Paul C. Ruth has been appointed in the Cleveland Chapter to succeed Frank A. Katonka.

Olaf A. Madsen has been appointed in the Staten Island Chapter.

Levels of Illumination. Sturrock, Walter. 1946. General Electric Co. Nela Park, Cleveland. free.

Compiled in collaboration with the Technical Staff of the Engineering Division of General Electric Company, Nela Park, Cleveland, Ohio. Reprinted from "Magazine of Light."

Scientific research has made a definite contribution to a more accurate determination of the degree of illumination which should be provided for various seeing tasks and this research is reflected in the levels of illumination recommended for the many varieties of locations and activities listed.

Fire and the Air War. Bond, Horatio, Chf. Engr. Natl. Fire Prot. Assoc. Boston. 1946. 276 p. illust. $4.00.

Here is presented in a concise, factual and informative manner a thought-provoking addition to the "Now-it-can-be-told" books of World War II.

Readers may be surprised to learn that fire, more than high explosives, reduced the Axis cities to rubble. One hundred and sixty-one illustrations, some hitherto "secret" and unpublished, point-up this record of the part fire played as an offensive weapon of warfare.

A series of 14 well illustrated articles, covering various phases of the general subject, as particularly related to conditions in England, Germany and Japan provide an authoritative record of the results of bombing and fire in these countries.

In this there are lessons for architects and those interested in city planning and the rehabilitation of deteriorated urban centers.

Of particular interest is the official Report of the U. S. Strategic Bombing Survey on "The Effects of Atomic Bombs on Hiroshima and Nagasaki" and "Some Observations and Conclusions" by Messrs. Bond and McElroy, Engineers of N. F. P. A.

Concrete Flooring with Asphalt Admixture, Anderegg, F. O. **ASTM Bulletin,** Dec. '46—30 cents.

By the Consulting Specialist on Building Materials, John B. Pierce Foundation, describing the use of an asphalt admixture in combination with Portland Cement to produce a floor which will give satisfactory service and a much better cushioning effect than straight Portland Cement Concrete.

Standards of Good Engineering Practice Concerning F. M. Broadcasting Stations

Federal Communications Commission

Provides authoritative information as to the requirements which must be met by F. M. stations which seek broadcasting licenses.

The rapid development of broadcasting technics is giving current interest to a widespread expansion of broadcasting facilities which will involve many new structures.

While many of the problems related to broadcasting are distinctly of an engineering character, the structural adjuncts and facilities are of architectural interest and deserve the attention of the architect.

Trade Practice Rules for the Masonry Waterproofing Industry. Federal Trade Commission, Washington 25, D. C. Free.

Other than factors of structural and sanitary safety the problem of making exterior walls weather tight is of first importance to architects, builders and the owners of buildings.

The distressing fact that the walls of many completed buildings develop sieve-like properties during unfavorable weather conditions has given rise and hope to many forms of cure-alls which are alleged to do everything from fending off the gentle shower to holding back flood waters.

Publicity for many of these so-called wonder workers make little, if any, distinction between "damp-proof" or "damp-resistant" conditions, subject to no static pressure and "waterproofing" or "water-resistant" conditions where pressure is present.

Extravagant claims are frequently made as to the durability or permanency of the product or treatment.

In an effort to protect the public against extravagant and misleading claims and practices, the Federal Trade Commission, after due public hearings, has promulgated these rules, which include a series of "Definitions" and describe in detail various "unfair" trade practices and the misuse or deceptive use of certain terms, trade names, etc.

CITY PLANNING

New Cities for Old. Justement, Louis. New York, McGraw-Hill. 1946. $4.50.

An important and completely realistic new study of city planning and urban redevelopment illustrating the problems of economics, politics, administration, finance and design which together must be solved in order to achieve cities satisfying our sense of order, efficiency and beauty. The author cites the decay which threatens our towns as they are now constructed, and the futility of piecemeal planning redevelopment. He outlines a broad program of city planning and rebuilding, coordinating the needs of urban redevelopment with the larger needs of the national economy—a plan providing a suitable and inspiring means of utilizing our boundless productive capacity. This book seeks to understand some of our most baffling social, economic and planning problems, and reach solutions integrating the respective responsibilities of economists, public officials, realtors, architects, builders, bankers, lawyers, labor leaders and politicians.

The City is the People. Churchill, Henry S. New York Reynal & Hitchcock. 1946. $3.00.

There has been a long-felt need for an all-around work somewhere between the oversimplified pamphlet that intrigues, but fails to hold the interest of the thinking reader and the highly technical reference book, incomprehensible to anyone but the economist or professional planner. This book stands on its own merit as a thoughtful and unambiguous study of broad scope.

FIRE RESISTANCE OF CEILING CONSTRUCTIONS

A fire in residence construction which extends to a more or less open attic space quickly spreads and is difficult to control.

For this reason the fire resistance of the ceiling over the top story is an important factor in retarding or preventing the spread of fire to the attic.

In connection with a project sponsored by the National Housing Agency fire tests were made on typical ceiling constructions and, in addition, applicable data were compiled from other tests that had been made of ceilings exposed as part of floor constructions.

The results showed that ceilings gave protection to supporting members and served to prevent communication of fire for periods from 8 minutes for wood lath and lime plaster to 60 minutes for a metal lath and plaster ceiling supported on steel joists.

Gypsum boards or sanded gypsum plaster on gypsum or metal lath attached directly to wood joists provided protection in the range of 11 to 16 minutes.

Protection was considerably increased by incombustible insulation placed over metal lath and plaster ceilings suspended below wood joists.

LIGHTING HANDBOOK

The Illuminating Engineering Society has announced that the publication of the I. E. S. Lighting Handbook, originally scheduled for the fall of 1946, has been postponed to October 1947, to permit the inclusion of a more complete listing of post-war catalogue material for the Handbook Reference Data Section.

AMERICAN SOCIETY FOR TESTING MATERIALS

The A.S.T.M. has organized a new committee on Methods of Testing Building Constructions, E-6, the scope of which is:

> "To formulate methods of test for building constructions, including elements, connections and assemblies under actual or simulated service conditions, applicable to the evaluation of such factors as materials, design, construction and fabrication."

The Institute is represented on the Committee by the Technical Secretary.

The providing of uniform, nationally accepted methods of testing, particularly with respect to new materials, new methods of construction and improved technics in methods of assembly, will prove of value to the construction industry as a whole.

HOUSING FILMS

A new 16mm. one-reel film available from the Twentieth Century Fund shows why housing costs are so high. Miles Colean, author of "American Housing" collaborated with the Fund and Encyclopaedia Britannica Films in producing the movie. Sales price is $50.00 with a 10 percent discount to educational institutions, and it will also be available for rental from film libraries.

Twentieth Century Fund, 330 West 42nd Street, New York 18, N. Y., will furnish information.

FLOATING BUILDING ABSORBS EARTHQUAKE SHOCK

In order to conform to California's laws on earthquake-resistant construction it was necessary to provide for horizontal forces in a three-story addition placed on top of a Los Angeles building not designed for earthquake forces. The addition was anchored with horizontal ties to an adjacent building designed to resist horizontal forces, while roller bearings transmit only vertical loads to the old building below. Articles giving details of this operation appear in Civil Engineering, Vol. 16, No. 12, December 1946, page 539, and Engineering News-Record, Vol. 136, No. 24, June 13, 1946, pp. 925-927.

THE CHOICE OF FUELS

Coal strikes should become less frequent if consideration is given to the results of a study, released by the NHA, of fuels and heating systems planned by builders for use in new conventional houses built under the Veterans Emergency Housing Program.

This analysis covered applications representing authorizations for more than 629,000 dwelling units.

Coal represented 27% of all applications, as compared with 73% for oil and gas.

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